MAY 1952 2/6

BUSINESS

The Journal of Management in Industry

SPECIAL **BIF** ISSUE

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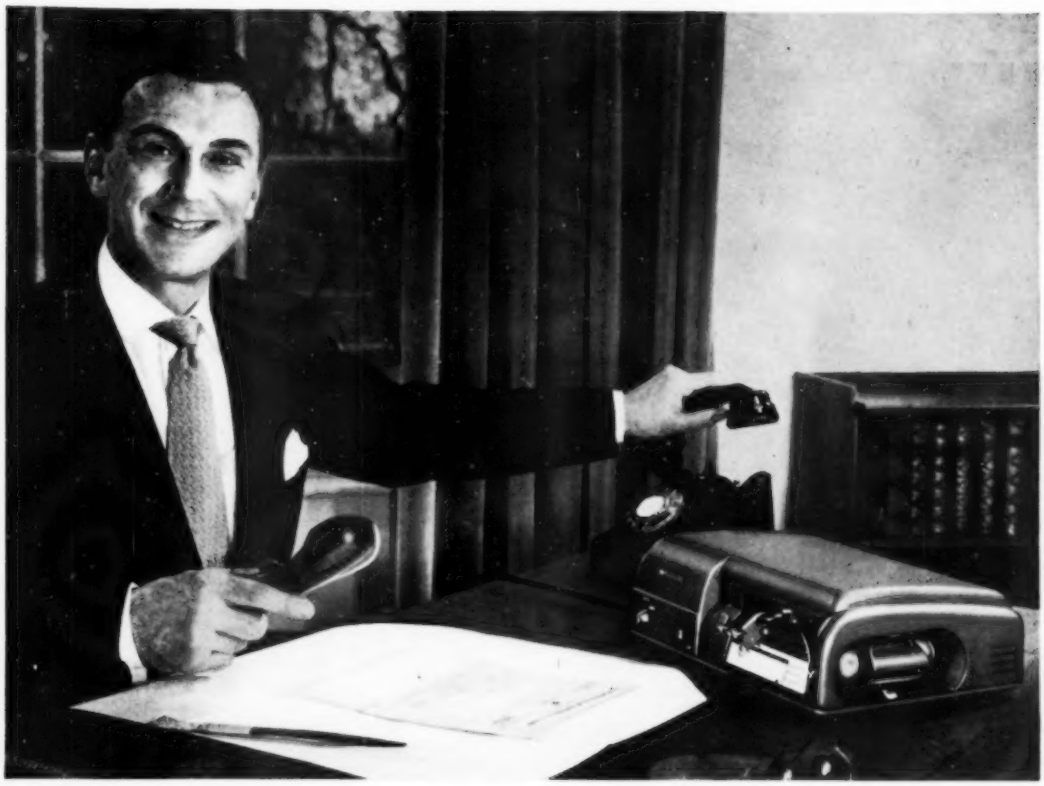

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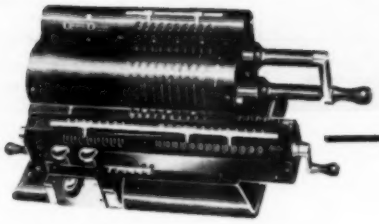

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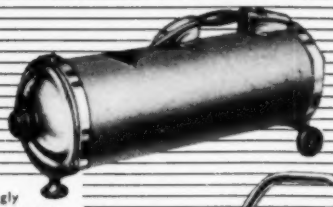

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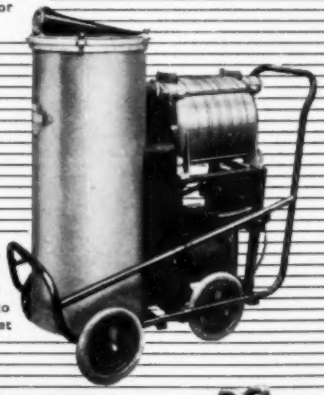
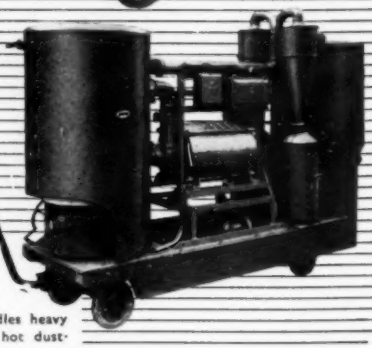


MODEL T23X. An extremely compact but powerful general-purpose machine or factory use. Cyclone top to prevent clogging or for wet floors.



MODEL T87. Designed for cleaning Lancashire and other large boilers, furnaces, and Gas Works retorts. Handles heavy smouldering or red hot dust.

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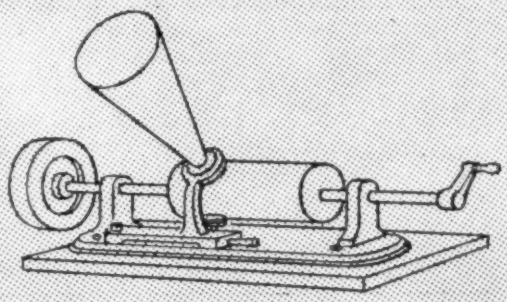

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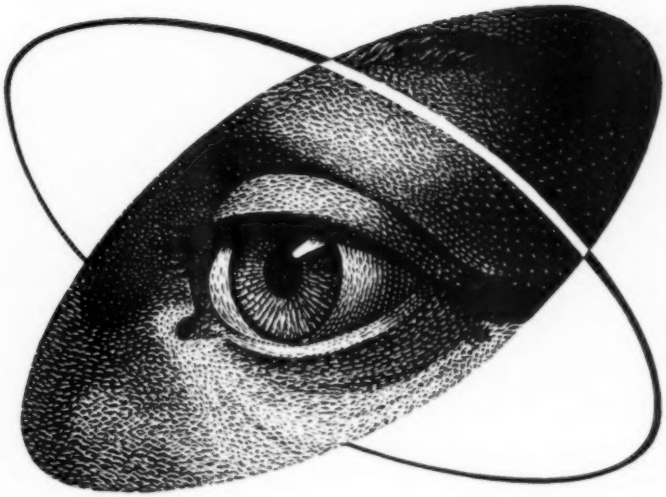

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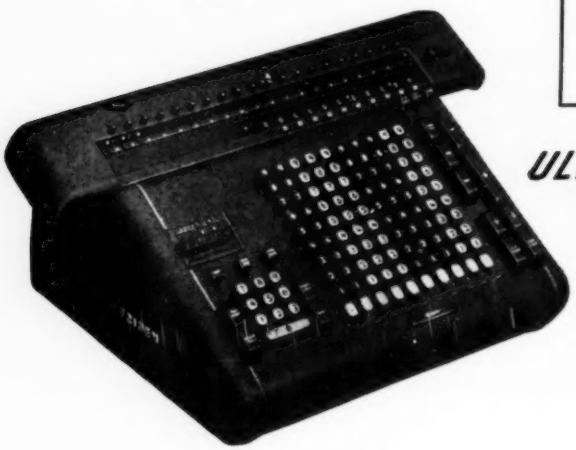

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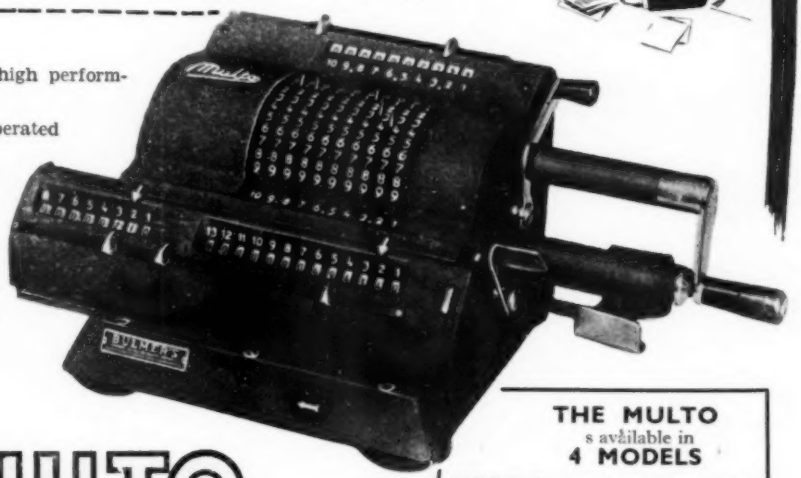

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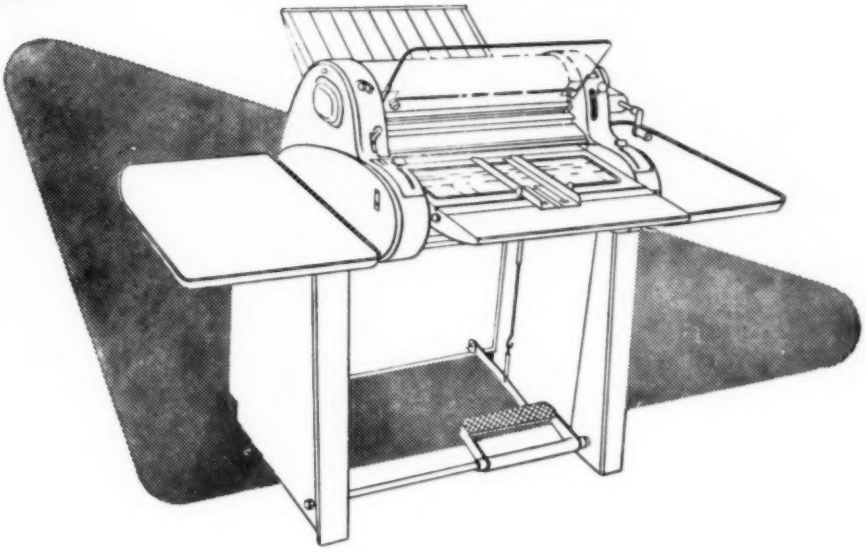

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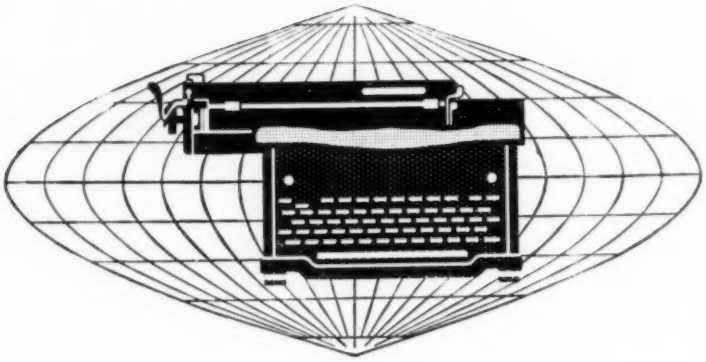

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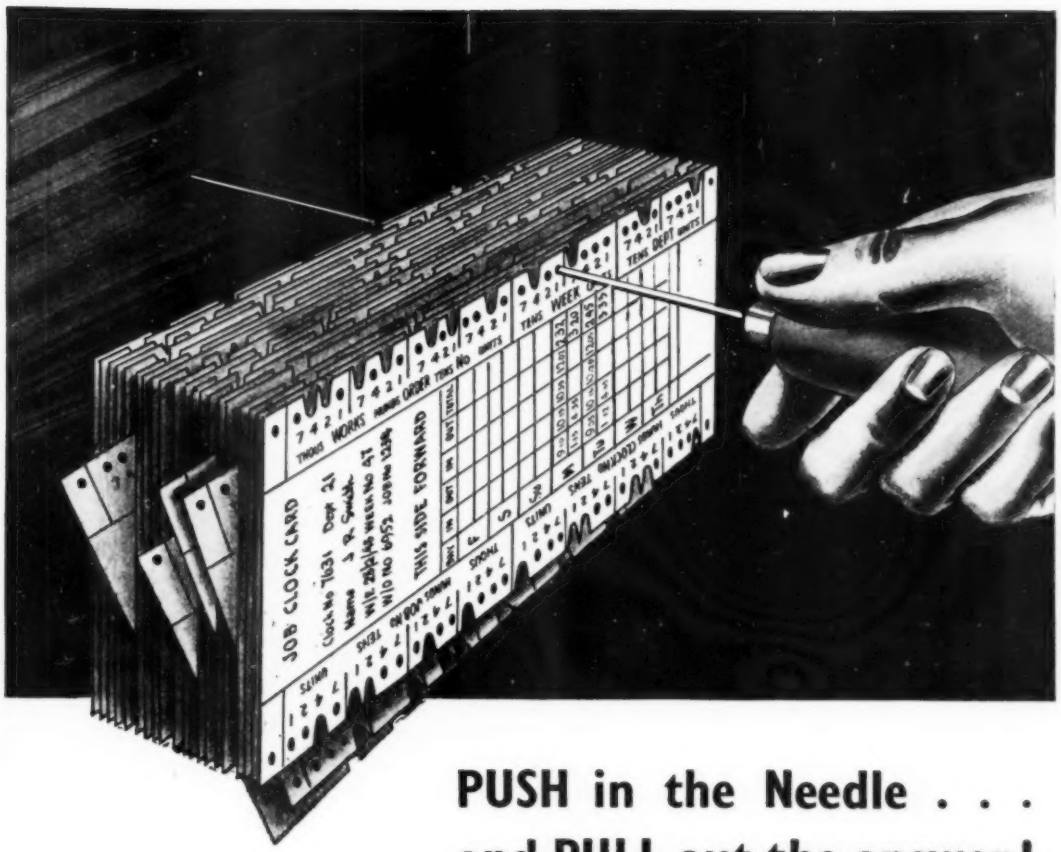

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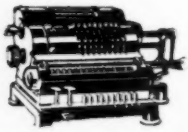

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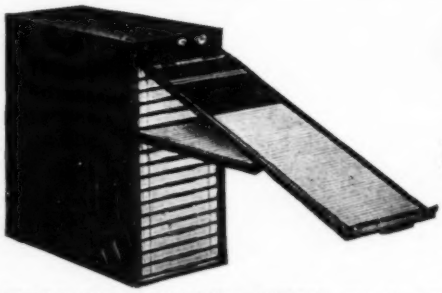

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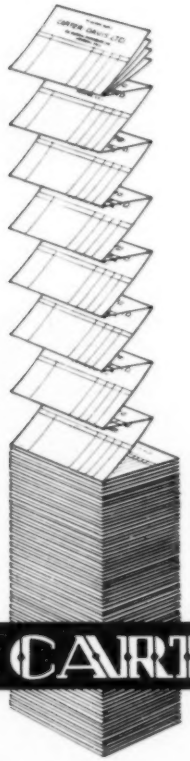

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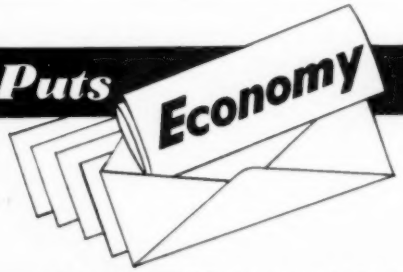

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DICTOREL DICTATION IS UNIQUE. No other machine uses simply a foolscap sheet of paper as the recording medium. Discs, wire, tape and belts are dispensed with. The design ensures simplicity in operation—there are no confusing knobs or switch controls. Every feature of the equipment effects savings in time and money ● Constant re-use of the paper sheets (called Dictograms) ● Easy for filing ● Immediate reference back or forward to any desired point in the dictation. ● Instantaneous play-back.

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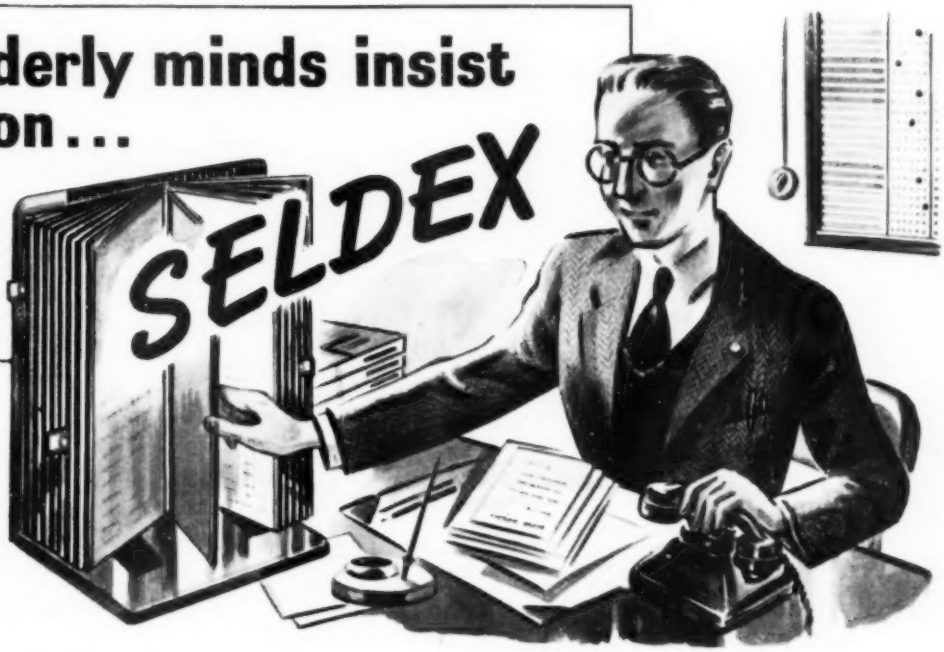

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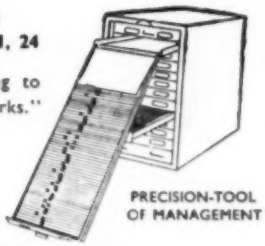

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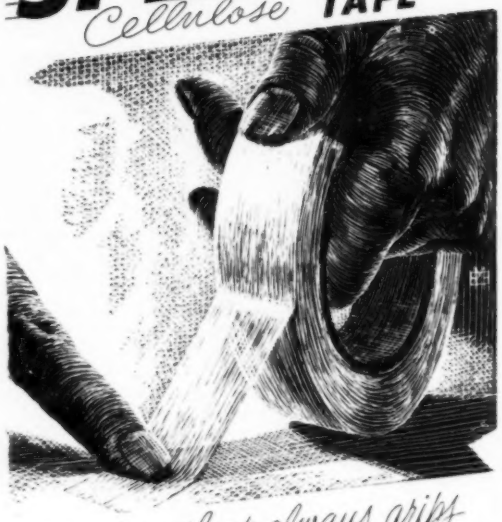

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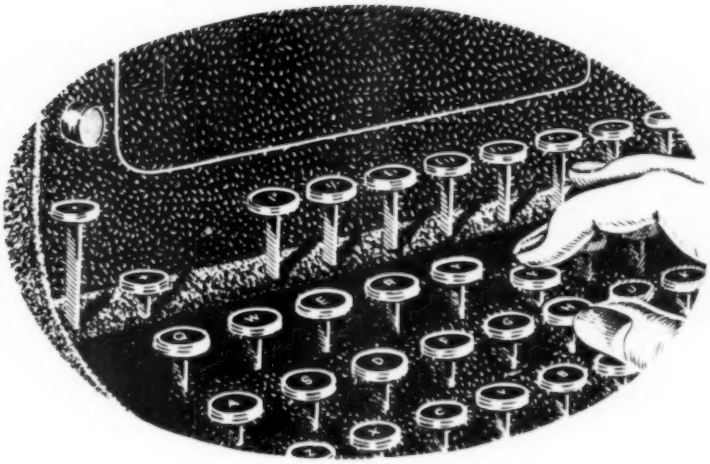

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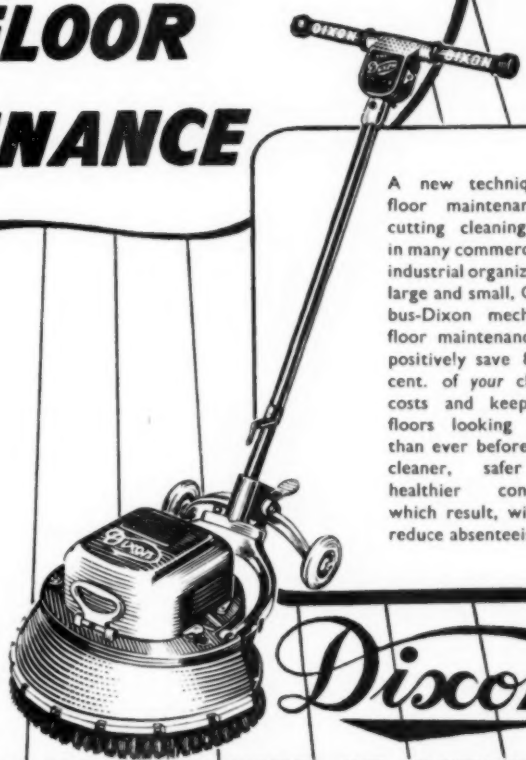

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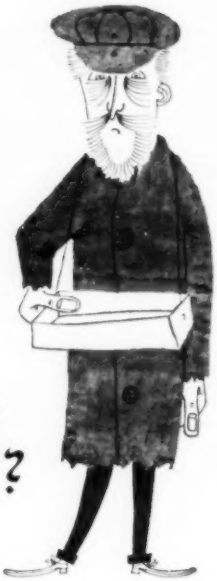

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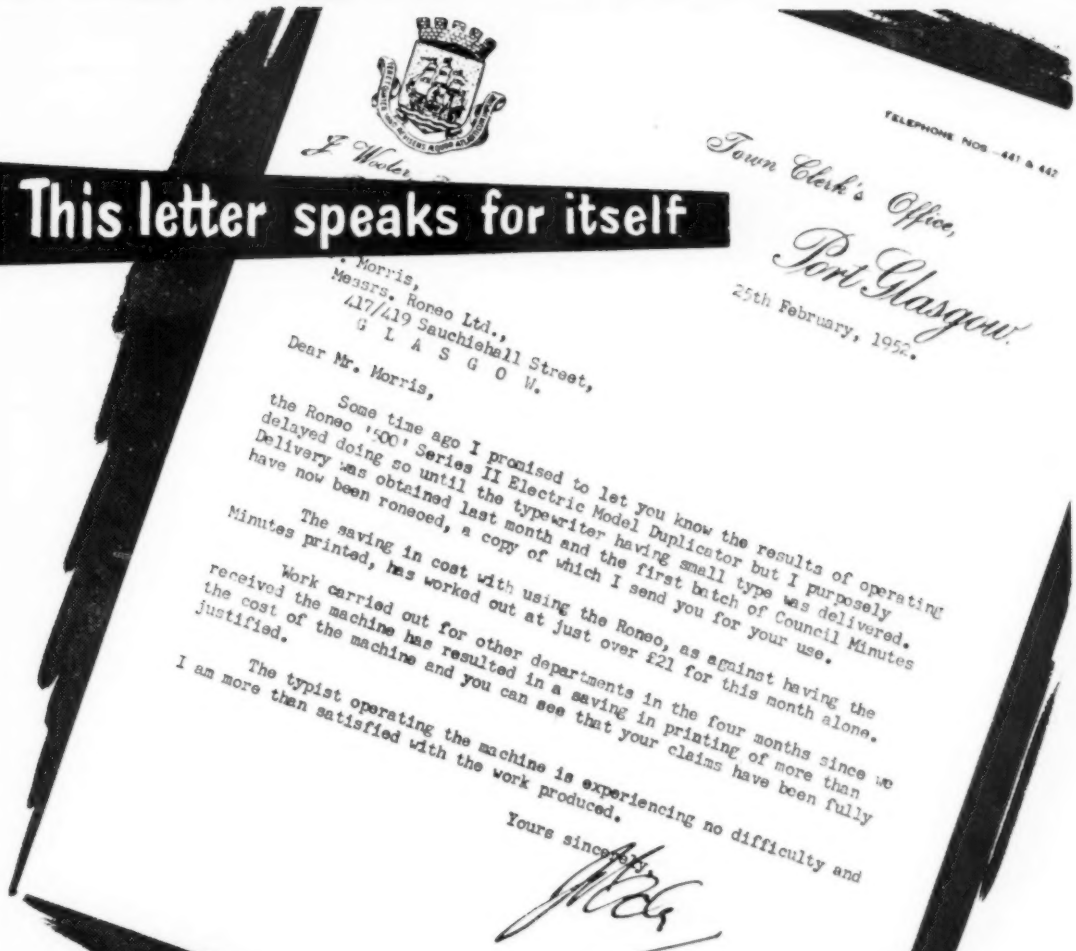

TELEPHONE NOS. 441 & 442

Town Clerk's Office,
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25th February, 1952.

Messrs. Roneo Ltd.,
417/419 Sauchiehall Street,
G L A S G O W.

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Yours sincerely,

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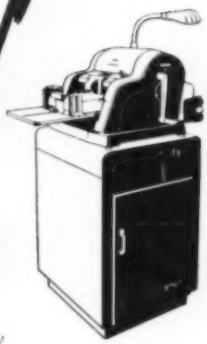

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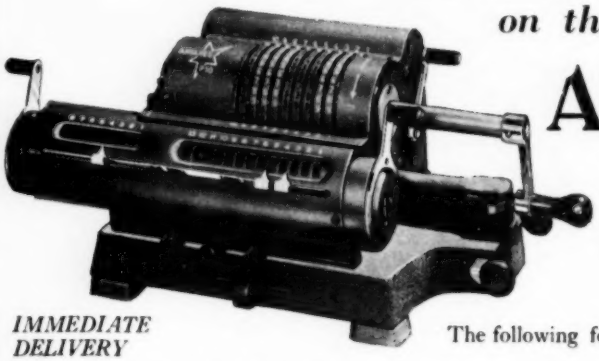

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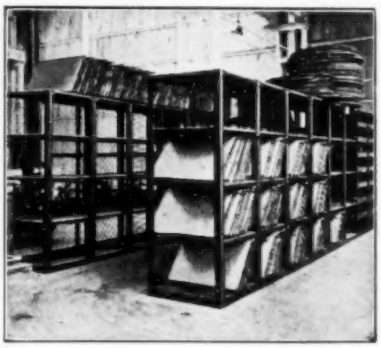

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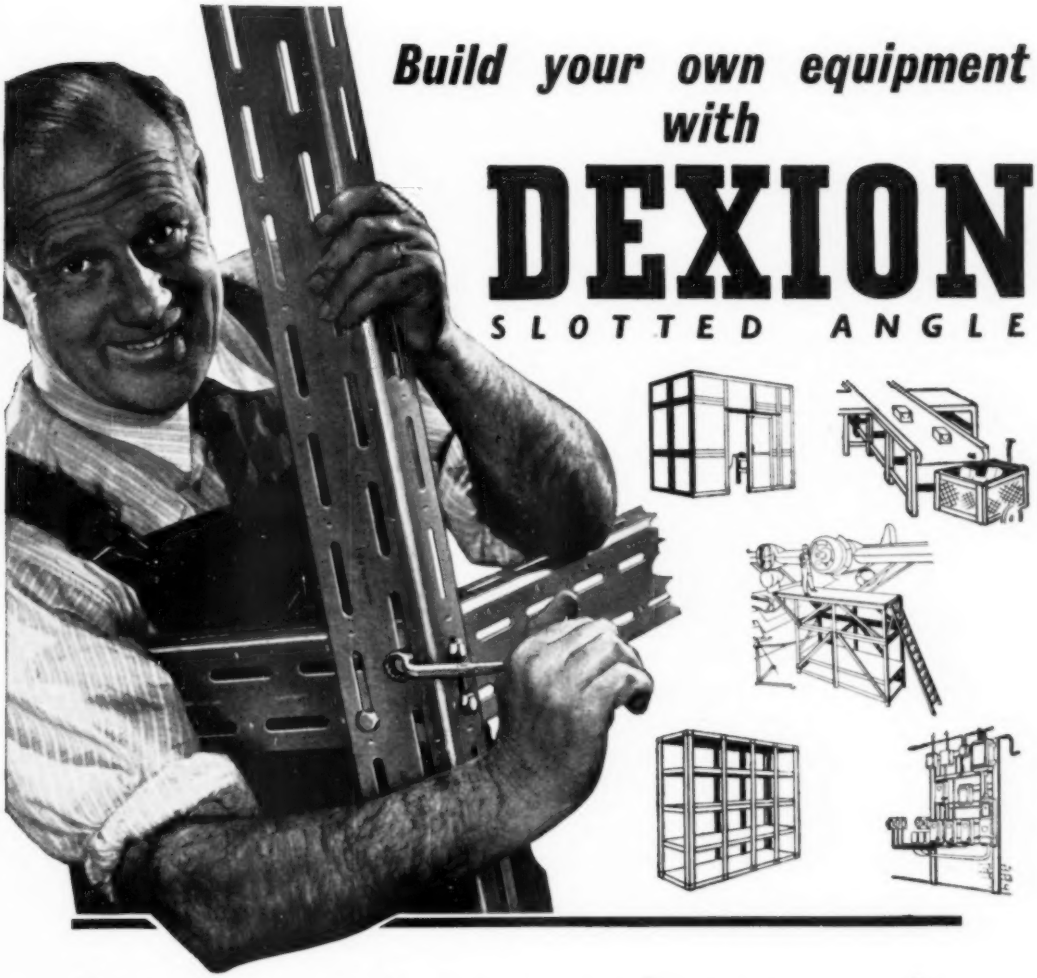

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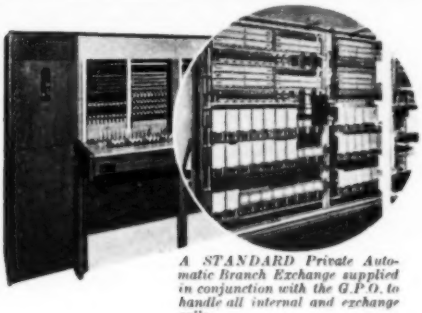

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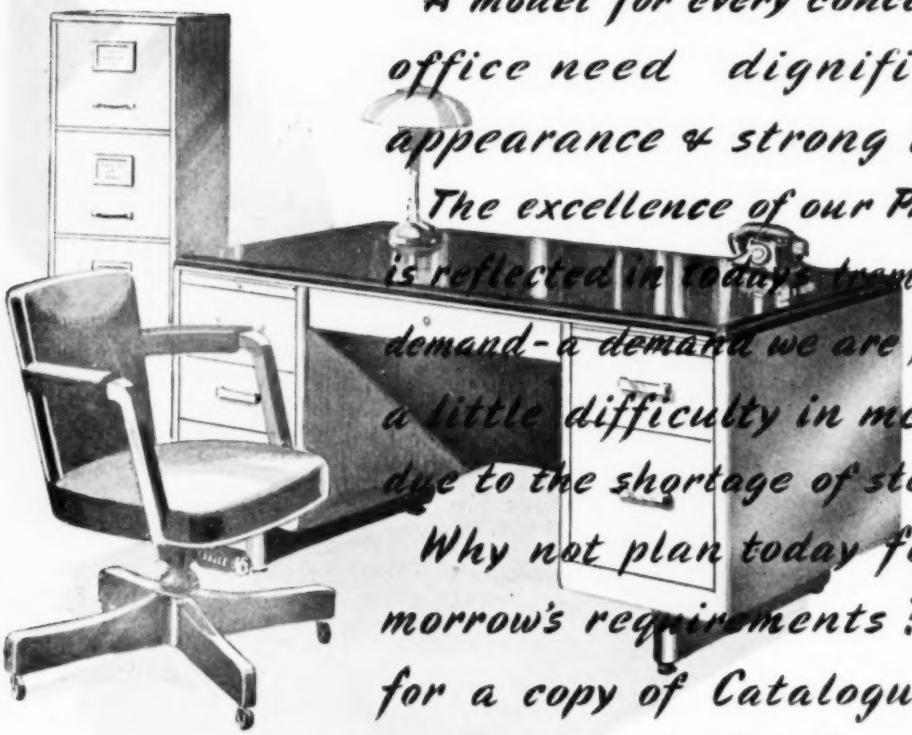

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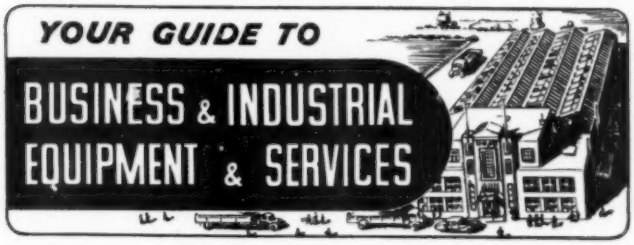

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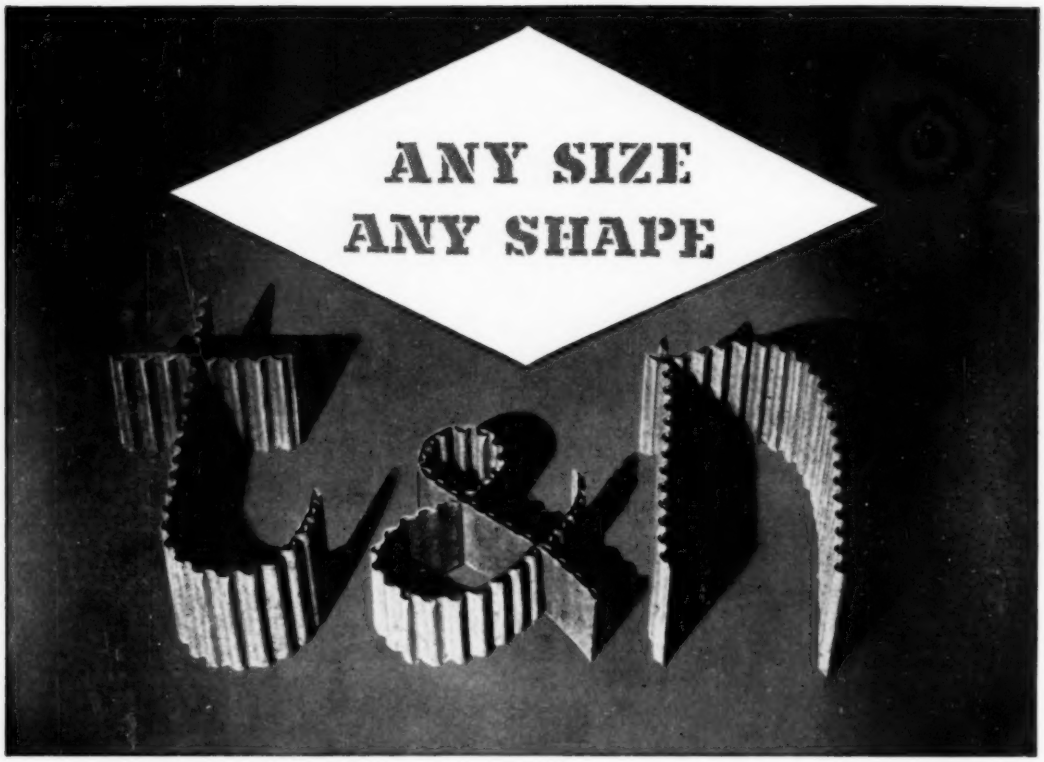

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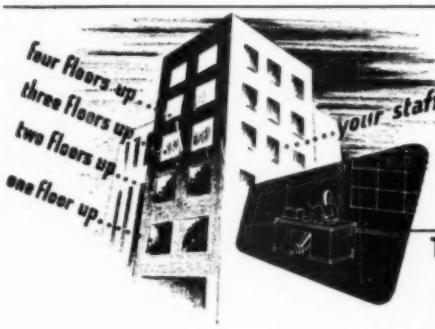

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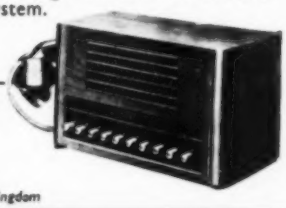

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THE CASE OF THE VANISHING VARNISH

THE BOOKS *weren't ready to be made up till* six months *after the financial year ended. By then, discrepancies had to be written off....*

A "liquid asset" – *till it disappeared from the books!*

THE PAINT and Varnish manufacturing firm of A. Macnair and Co. Ltd., Manchester, was doing well. Their volume of business had increased many times since 1939, and there were no complaints from management or factory employees.

In the office, however, staff using pen and ink methods had to put in much overtime to get statements out by the middle of the following month. Sometimes, wrong figures were posted from the day book to the ledger account; sometimes, items were not posted to the ledger at all. The auditors, called in to make up the books after the end of the financial year (usually a six-months job), found that it was continually necessary to write off discrepancies to balance the books.

Macnair's called in Burroughs to offer expert advice. They suggested slight adjustments to Macnair's existing system and recommended a Burroughs Bookkeeping Machine.

Result? Although production has doubled and premises quadrupled, Macnair's office staff is the same size. Statements are now sent out regularly on the *second* working day of each month. Audit for the year ending March 31st 1951 was completed by April 19th!

WHAT ABOUT YOU? If you are faced with any time-lag in obtaining full figures on the state of your business, your wisest step is to call in Burroughs now. They are experts in interpreting figuring problems in relation to the latest systems, for Burroughs make the world's broadest line of Adding, Calculating, Accounting, Billing and Statistical Machines and Microfilm Equipment.

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The MARCH of BUSINESS

THE GREAT SWITCH

THE EFFECT of the Government's emergency measures to balance our overseas trade may be seen at a glance from the chart on page 43. Thanks largely to the restriction of imports, the gap between imports and exports, which had widened catastrophically during the latter half of 1951, has been narrowed again.

The maintenance of this improvement, however, depends on the continuance of our exports at current levels. Unfortunately, we are by no means the only country with an adverse trade balance. Australia, South Africa, New Zealand and other commonwealth countries have all recently been attempting to reduce their own gaps by the same method with which we tackled ours—by cutting imports. And their imports are our exports.

Thus even to maintain our present standard of living demands a wholesale switch of exports from the commonwealth and other "soft currency" countries to the "hard currency" countries of the Western Hemisphere. This is not going to be easy. There are many obstacles, such as tariffs, to overcome. American customers tend to be "choosy." Competition—particularly from Germany and Japan—is intense. Price becomes a more important factor in getting an order—and so does intensive and expert selling.

But it has to be done. Moreover, as the articles on pages 49 to 56 show, it can be done. How far it will be done depends, as Sir Archibald Forbes, president of the Federation of British Industries, has pointed out, on a great effort to reduce costs, which in turn requires an adequate flow of materials, managerial skill, and, above all, a ready response to the incentives given to work harder,

A Message to "BUSINESS"

from the

President of the Board of Trade

Mr. Peter Thorneycroft, M.P., President of the Board of Trade.

I WELCOME this opportunity to compliment "Business" on its initiative in publishing a number devoted largely to the British Industries Fair. The journal is a particularly suitable one to publicize a Fair whose motto is "BIF Means Business".

Your many readers in this country will not need a reminder from me that one important reason for the Fair is to give home buyers the opportunity to compare prices and qualities and the developments of the past twelve months, but I am glad to know that you are emphasizing the importance of the BIF in relation to our export trade.

For that is vital. We are again in a critical period when it will take all our effort to maintain our modest standards of living and to play our full part in defence. We must ensure that our earnings of foreign currency are sufficient to buy the food and raw materials upon which this highly-populated island is dependent.

THIS YEAR'S British Industries Fair will provide evidence that our manufacturers are fully alive to the needs of the situation, that they are upholding our reputation for quality while making imaginative use of new materials and processes, and that they are sparing no effort to cater for the particular needs of the customer overseas.

This year's Fair will, too, give special prominence to the importance of the Commonwealth in world trade. We propose to celebrate Wednesday, May 14th, as Commonwealth Trade Day, when a number of special ceremonies will take place to show our appreciation of the subject and afford an opportunity of giving a special welcome to buyers from the Commonwealth.

We again expect to welcome to the Fair many thousand buyers from abroad. The organizers of the Fair will be doing all they can to ensure the comfort and the facilities our guests require. But, in the end, the success of this great annual effort depends on their negotiations with manufacturers and businessmen—many of them readers of this journal. I have every confidence in a mutually profitable outcome.

Having trouble with

Hadley can help you

by both managers and workers. The cases we quote have set the standard; others can follow in their van.

★ ★ ★

THE OPENING item in the March issue of the staff news bulletin of Krisson Printing, Ltd., reads: "Following the article about our production control board in the January issue of BUSINESS, we had many requests for further information. Mr. B. Metcalf, managing director of Bradshaws of Birmingham, and Mr. F. Beswick of Mackie and Co., Ltd., Warrington, both spent a day with us."

And a later item states: "Still conscious of the questioning campaign, Edna read the BUSINESS magazine and marked a good half-dozen pages where she thought we could use some ideas."

Confucius, he say: "One hand washes the other."

★ ★ ★

CRISIS IN COTTON

DEPRESSION in the textile industries is a curious phenomenon; its immediate causes are obscure. Its world-wide nature precludes the possibility of finding a single scapegoat in this or any other country. It is not only Lancashire that is hit. Cotton weavers in Belgium are working a three-day week, and woollen mills are running at half capacity. In the United States, some 62,000 of New England's 140,000 textile workers are unemployed. In Canada, mills have been working only three days a week for six months. Even in Japan, producers are preparing for a 40 per cent. cut in output.

Fundamentally, the problem is that of a shrinking world market. Before the first world war, the majority of nations imported the textile products they used; today they make them themselves. The extent of this trend has been under-estimated by producing countries such as Japan, and the post-war sellers' market masked its existence.

But, as George Hasty, the president of the Federation of Master Cotton Spinners' Associations, pointed out to the annual meeting, none of the causes of the recession needs to be lasting.

Apart from a more liberal ration of dollars to buy American cotton and no undue holding up of defence orders, there was little that Mr. Hasty asked of the government. To the industry, he put a programme to reduce costs to competitive levels which included (1) two-shift working of 37½ or even 40 hours instead of the present one shift of 45 hours; (2) a revision of wage lists, and (3) management - labour co-operation for the improvement of the industry's competitive position in the cotton textile world.

★ ★ ★

TINPLATE bobbins for the textile industry, confectionery and biscuit boxes decorated by the use of colour photography, food tins with the label printed on the metal in a process-resistant ink, and a new type of vacuum seal for jams and bottled fruits were features of an exhibition recently held by the Metal Box Co., Ltd., to highlight new developments. Versatility of the company was shown by the presence of clock faces, ornamental plaques, choke boxes, lamp reflectors and cork lining materials in various forms.

★ ★ ★

THE OTHER GAP

SIR GEORGE SCHUSTER is a remarkable man. As chairman of the Human Factors Panel set up by the government Committee on Industrial Productivity he is responsible for directing the work of the medical and social scientists investigating problems of human relations in industry. As a director of the Westminster and other banks and commercial concerns, he is in constant contact with the business community.

It is, no doubt, this Jekyll and Hyde aspect of his life that makes him so conscious of the gap in industry between what is and what might be. Businessmen, he asserts roundly, have yet to apply the lessons learnt by the scientists 30 years or more ago. "British industry," he writes in a foreword to a report on joint consultation sponsored by the Human Factors Panel, reviewed on page 56, "is only tinkering with the subject."

Introducing a paper describing the work of the Panel at the recent conference on Human Relations in Industry organized by the Ministry of Labour and National Service, Sir George suggested three reasons for the existence of the time-lag:

(1) the appalling jargon used by social scientists, which rendered their results incomprehensible to the layman;

(2) the reluctance of "practical" businessmen to admit that they had anything to learn about the art of handling men; and

(3) the lack of contact between universities and research organizations specializing in the social sciences and the business community.

In spite of this, however, the paper which Sir George introduced shows that a good deal is already being done to overcome these difficulties. What is disconcerting was to find that Sir George's introduction—the one bright spot in a conference that was otherwise completely abortive—was listened to by a section of his audience with barely-repressed impatience.

Continued on page 41

The World at Your Desk

The Lord Mayor of London recently opened the *Desk-fax* facsimile service, introduced by Western Union to speed up transmission and delivery of cables. The *Desk-fax* is a small instrument about the size and shape of a typewriter that can send or receive about 150 words in two minutes, and can also be used to transmit drawings, etc. The service is at present limited to communications between the Western Union offices and clients within a ten miles radius.

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A John Dickinson PRODUCT

A NEW CATALOGUE issued by Thermionic Products, Ltd., describes the Recordon 504. *This model uses a paper disc that can contain six minutes' dictation, as against the three minutes in the original* Recordon.

★ ★ ★

ERGONOMICS IS GREEK

FURTHER illustration of the gap between science and industry was seen at the recent Symposium on Fatigue of the Ergonomics Research Society. This organization aims to develop a science that can deal adequately with the design and operation of the equipment with which a man works and the environment in which he works. In the past, societies have covered only one part or other of this field, but in this organization emphasis is laid on inclusion of those who are applying the research to the design of equipment. In the Bletchley conference, a few personnel and production study men found themselves struggling with a long succession of papers in which there were frequent references to tilting, pack test scores, ergograph fatigue curves, motor skills, finger tremors, massed and spaced learning and other technical terms associated with physiology or psychology.

The ideas behind these terms often proved to be straightforward enough, but their interpretation needed a sustained and fearful effort. At the end of the conference more than one representative of industry confessed that it had been "80 per cent. Greek to him," while the practical value to their organizations was said to be negligible.

★ ★ ★

FLUORESCENT INKS have recently altered the face of posters. Now come fluorescent textile dyes. Yarns treated with these dyes are incorporated into textiles and were shown recently at the Rayon Industry Design Centre. When activated by an ultra-violet lamp, the luminous patterns glow against the semi-darkness. This may have unexplored possibilities in theatres and restaurants.

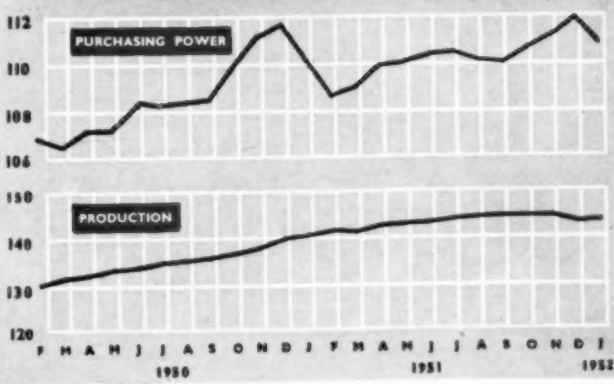
Deep-textured rayon furnishing fabrics were also shown for the first time. The surface of these progresses from a comparatively smooth texture with the appearance of fine terry towelling to a

SALIENT FIGURES OF THE MONTH

		Latest Month	Increase (+) or Decrease (—) on a Month Ago	Year Ago
"BUSINESS" INDICES				
Production ...	(1946=100)	* 144.3	+ 0.3	+ 3.6
Purchasing Power	do.	* 110.5	— 1.3	+ 0.1
MANPOWER				
Total manufacturing industries ...	(thousands)	* 8,751	— 33	+75
Cotton spinning and weaving	do.	* 316.9	— 3.1	— 15.5
Coal (on colliery books) ...	do.	708	+ 6	+ 10
Reg. unemployed (U.K.) ...	do.	446.6	+ 20.7	+111.7
PRODUCTION				
Index of production	(1946=100)	* 144	+ 5	+ 4
Coal (average weekly output) ...	(thousand tons)	4,560	+223	+ 43
Steel ingots and castings (do.)	do.	313	+ 20	— 13
Cottom yarn (do.)	(million lb.)	* 16.21	+ 1.19	+ 0.28
Woven wool fabrics (do.)	(million linear yards)	31.96	— 2.09	— 5.04
Passenger cars (do.)	(thousands)	8.76	— 0.31	— 1.34
Commercial vehicles (do.)	do.	5.00	Same	— 0.66
Permanent houses completed	do.	* 15.69	— 3.63	+ 2.54
TRADE				
Value of imports	(£ millions)	† 332.8	+ 35.9	+ 29.4
Value of exports	do.	† 245.5	+ 17.6	+ 55.5
Freight train traffic	(million tons)	‡ 5.74	+ 0.25	+ 0.05
Retail sales ...	(1947=100)	143	+ 4	+ 2
FINANCE				
Currency in circulation .	(£m.)	1,327	+ 7	+ 66
Deposits in London Clearing Banks	do.	5,893	—311	—148
Provincial cheque clearings (average working day) ...	do.	7.56	— 0.40	— 0.43
WAGES AND PRICES				
Weekly wage rates	(1947=100)	128	+ 1	+ 12
Retail prices	do.	† 133	Same	+ 14
Raw materials prices	(1949=100)	† 170.2	— 6.8	— 50.2
Mech. eng. ind.	do.	† 152.2	+ 8.6	+ 23.9
Elec. machinery	do.	† 165.4	+ 5.2	+ 22.3
Building, etc.	do.	† 136.2	+ 1.4	+ 18.4
Import prices ...	(1951=100)	103	Same	+ 11
Export prices	do.	107	+ 1	+ 15

*January. †March. ‡Four weeks to February 24th, 1952
All other figures refer to February.

"BUSINESS" INDICES (1946=100)



How to cut absenteeism

The main cause of lost time in industry, according to the Medical Research Council, is sickness absence. Much of this absenteeism can be traced to the transmission of contagious ailments through the use of communal towels. After washing, hands should be dried on a clean, fresh, fluff-free paper towel—an immaculate towel like Hi-Dri, designed to be used once, then thrown away!

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heavy one of maximum depth. This is achieved by combining wool and cotton with the rayon. Tinsel thread is woven into some cloths to give a rich golden sheen.

★ ★ ★

ACCOUNTANTS ARE WORRIED

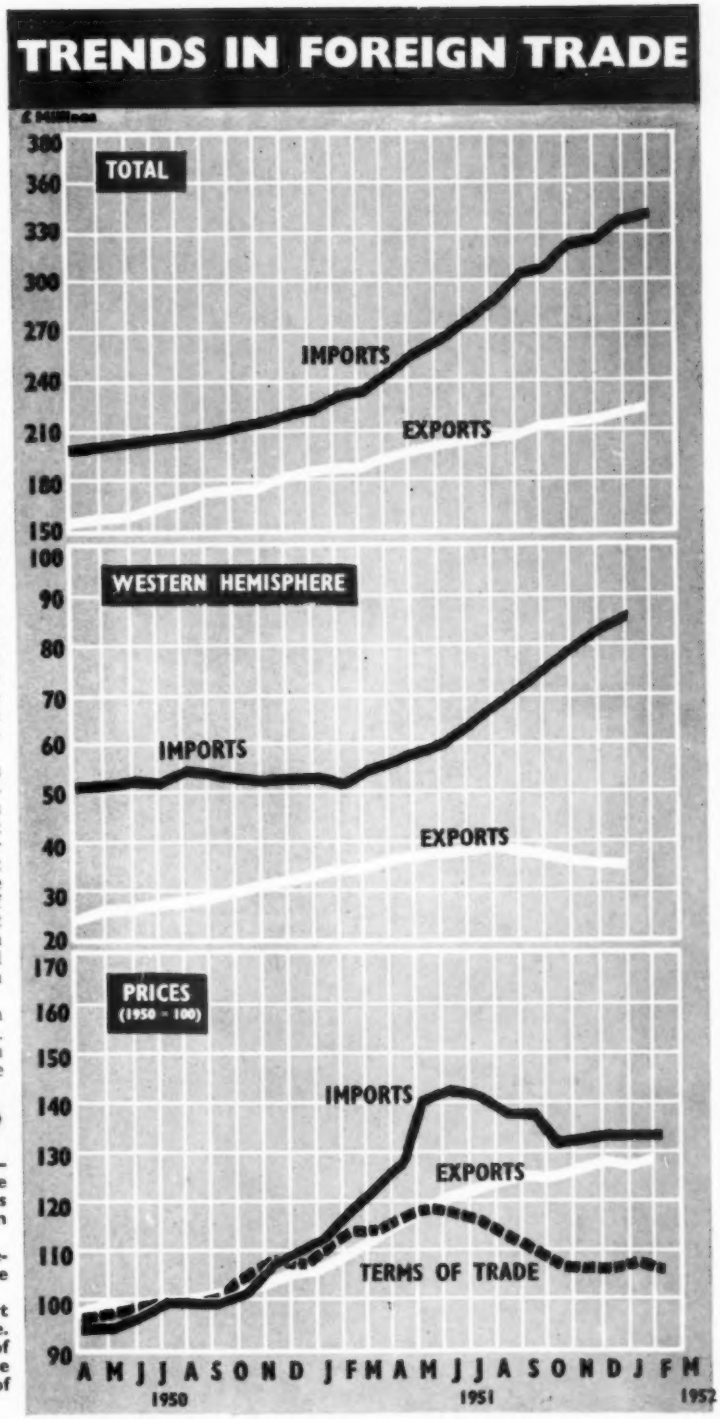
THE PROBLEM of keeping accounts in a time of constantly rising prices, referred to in this column last month, continues to crop up. Chairman after chairman bemoans the fact that new plant costs three or four times as much as the identical plant it replaces, bought before the war.

But if businessmen are worried, so are the accountants. Two important studies of the problem have recently appeared, one on each side of the Atlantic.

In 1947, the American Institute of Accountants set up a study group of 44 accountants, lawyers, economists and businessmen; a report of their three-years' study has just been published under the title, *Changing Concepts of Business Income*. In Britain, the Institute of Cost and Works Accountants started a somewhat similar survey in 1949, the results of which have now been published in book form, under the title, *The Accountancy of Changing Price Levels* (15s.), with an abridged version (2s. 6d.) written specifically for businessmen.

Important as these two reports are, neither makes for easy reading. The British, in particular, is an outstanding example of that jargon which Sir George Schuster so rightly deplores. The almost simultaneous publication by the Institute of a revised edition of their booklet *Terminology of Cost Accounting* helps a little, but even a reader cognisant of the technical terms used still has to face over a hundred pages of turgid prose.

To summarize these reports in a paragraph is obviously impossible. The salient practical conclusion that emerges is that today the



The adjoining chart shows :—

(1) a twelve-month moving average of imports (c.i.f.) into and exports (f.o.b.) from the United Kingdom and the rest of the world;

(2) similar figures for trade between the United Kingdom and the Western Hemisphere; and

(3) indices of import and export prices and of the terms of trade. The terms of trade are the ratio of import to export prices; a rise in the index represents a deterioration of the terms of trade.

FROM TYPIST TO EXECUTIVE . . .

correct posture is essential

Tan-Sad chairs are now the established seating for modern and progressive offices. Typists and Executives alike, require posture seating to attain maximum efficiency.

Everyone works better in a

Tan-Sad

Manufacturers and Patentees

THE TAN-SAD CHAIR CO. (1931) LTD.
AVERY HOUSE, CLERKENWELL GREEN, LONDON, E.C.1

SPECIALISTS IN SCIENTIFIC POSTURAL SEATING

businessman must keep two sets of books, one for the official record, the other, suitably adjusted, to guide him in his decisions on policy.

★ ★ ★

THE SECOND of two windmills will be installed in 1953 at Mynydd Ammelog (Caernarvon) to generate electric power from the wind. The performance of these two machines (the first has already been erected on Costa Head, in the Orkneys) will decide British wind-power research and development for the next ten years or more.

"The wind plant must produce energy at a cost of 0.4d. per kWh. to be competitive with coal-fired plant," said C. W. Marshall, deputy chief engineer of the British Electricity Authority, in a paper read to the Royal Society of Arts. "Several of our most competent aircraft propellor designers are working on the design.

★ ★ ★

SPEEDING THE SHIPS

THE SETTING UP of the Ports Efficiency Committee, a small body under the chairmanship of Lord Llewellin, to go into the complex causes of delays in the turn-round of ships in port, is welcome. There is no lack of evidence as to the appalling waste of man- and machine-hours in our ports. Even before the war, the position was not good; since, it has become catastrophically worse.

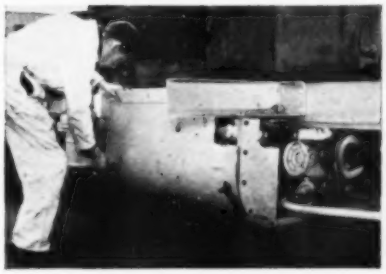
The latest light on port conditions is thrown by the annual report for 1951 of the Liverpool Steam Ship Owners' Association. The instance is quoted of a cargo liner company operating between Britain and India, Pakistan, Ceylon and the United States. Before the war, this company ran three voyages a year per ship. In 1951, the average was two and a quarter voyages a year, though a large proportion of the fleet had more engine power and improved cargo-handling facilities.

From 1947 to 1951, the time of turning ships round in port (according to this company) steadily improved. In 1951, all this progress was reversed—except on the Continent. In 1951, the average rate of discharge of bulk grain in Hamburg was 128 tons per hour; in London it was 71 tons per hour.

Another company reports that the rate of loading at Birkenhead—which compares favourably with other United Kingdom ports—was 500 to 600 tons a day, compared

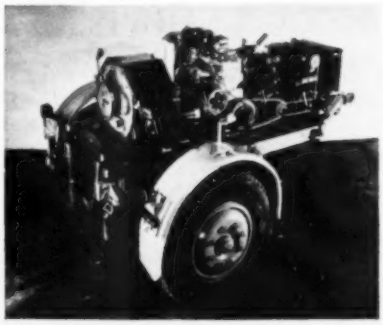
PEOPLE ★ PRODUCTS ★ PLACES

HOLLERITH IN ULSTER—Latest and largest factory of the British Tabulating Machine Co., Ltd., manufacturers of Hollerith punched card equipment, is at Castlereagh in Northern Ireland. The new plant is designed to permit redeployment of resources without extensive reconstruction. The establishment of the factory introduces an important new light industry to Ulster.



QUIET TIGER—Passengers in the latest Leyland Royal Tiger buses and coaches will have a quieter ride from now on. Engine noise is being contained by special acoustic shrouds fitted along both sides of the power unit. They absorb sound and also deflect sound-waves.

CARRYING COALS?—In 1946, H. A. Stevenson, managing director of Ether, Ltd., visited the U.S.A. and bought the patent rights of some electronic control equipment from a Chicago company. Ether's have developed the equipment, which is now incorporated in many British plastic injection moulding machines being sold to Canada and U.S.A. Thus they are selling almost in direct competition with the American firm's own products on their home territory.



THE RIGHT ROAD—This complicated looking trailer is an entirely new apparatus for testing the strength of roads under moving loads. Information obtained helps engineers to determine whether the strength of a road is adequate for expected traffic and, if not, to assess the improvement required.

P.P.P. CONTINUED

THE NEW

National "CLASS 31" Direct Entry Accounting Machine

This latest addition to the National range of business machines is designed primarily to simplify those more complex forms of accounting and statistical work which modern conditions have made essential to scientific management. For ease and simplicity of operation, this entirely new machine has no equal. Its introduction gives a new meaning to the expression "automatic accounting." Indeed, the most complicated entries can now be made with the ease and accuracy one is accustomed to expect when posting the simplest records.

10 Totals each with direct subtraction.

All balances—positive AND negative—computed and printed automatically.

Feather touch, 'standard' adding keyboard for speed and accuracy.

All-electric typewriter for unlimited narrative description.

Constantly visible printing line gives confidence, aids speed.

Instantaneous and infinite adaptability to any accounting work.

Fluid-drive carriage moves automatically by oil pressure in both directions.

Simultaneous addition or subtraction in ANY combination of registers.

Automatic carriage opening and closing with instantaneous form alignment.

Fully automatic spacing, column selection and carriage return.

A PRODUCT OF THE NATIONAL CASH REGISTER COMPANY LTD.

206 MARYLEBONE ROAD, LONDON, N.W.1

with 1,000 tons before the war. In Glasgow, it was no more than 200 tons a day.

★ ★ ★

TYPEWRITERS, cash registers and some office stationery have been imported freely under general open licence since last November from O.E.E.C. countries. From July 1, import licences for these products will again be required. Total imports in the second half of 1952 will be restricted to £40,000 for cash registers, and £140,000 each for typewriters (including parts) and stationery and office requisites other than paper goods.

★ ★ ★

MORE FOR MACHINES

CAPITAL EXPENDITURE in Britain in 1952 will have to be reduced. The picture is very different on the other side of the Atlantic.

Expenditures by United States businessmen on new plant and equipment are expected to rise by 4 per cent. in 1952 to a new record of $24,100m., according to the U.S. Department of Commerce. All major industrial groups, except railroad and commercial and miscellaneous, plan larger outlays this year than last. Manufacturers plan to raise plant and equipment outlays from $11,130m. in 1951 to $12,070m. in 1952, and durable goods industries will account for $800m. of the increase.

The larger increases include 92 per cent. for the non-ferrous metals industries and over 33 per cent. for electrical machinery, transportation equipment other than motor vehicles, and the rubber industries.

A similar trend is noted in Canada, where investment in industrial plant and equipment is expected to reach $5,000m., in 1952, or $400m. more than the previous record of 1951. The major increase will come in the steel industry, which by 1953 will be producing 1,150,000 ingot tons more than in 1951—an increase of one-third.

On the other hand, a further cut in capital investment in Australia is foreshadowed, in addition to the 25 per cent. cut in public capital investment that had already been made in 1951.

★ ★ ★

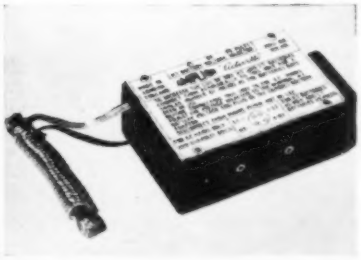
WE REGRET that, owing to a printer's error, the telephone numbers of Wingrove and Rogers, Ltd., in their advertisement on page 138 of the February issue were given incorrectly. The correct numbers are:—Stoneycroft 2265/6 and Abbey 2272/3.

PEOPLE ★ PRODUCTS ★ PLACES

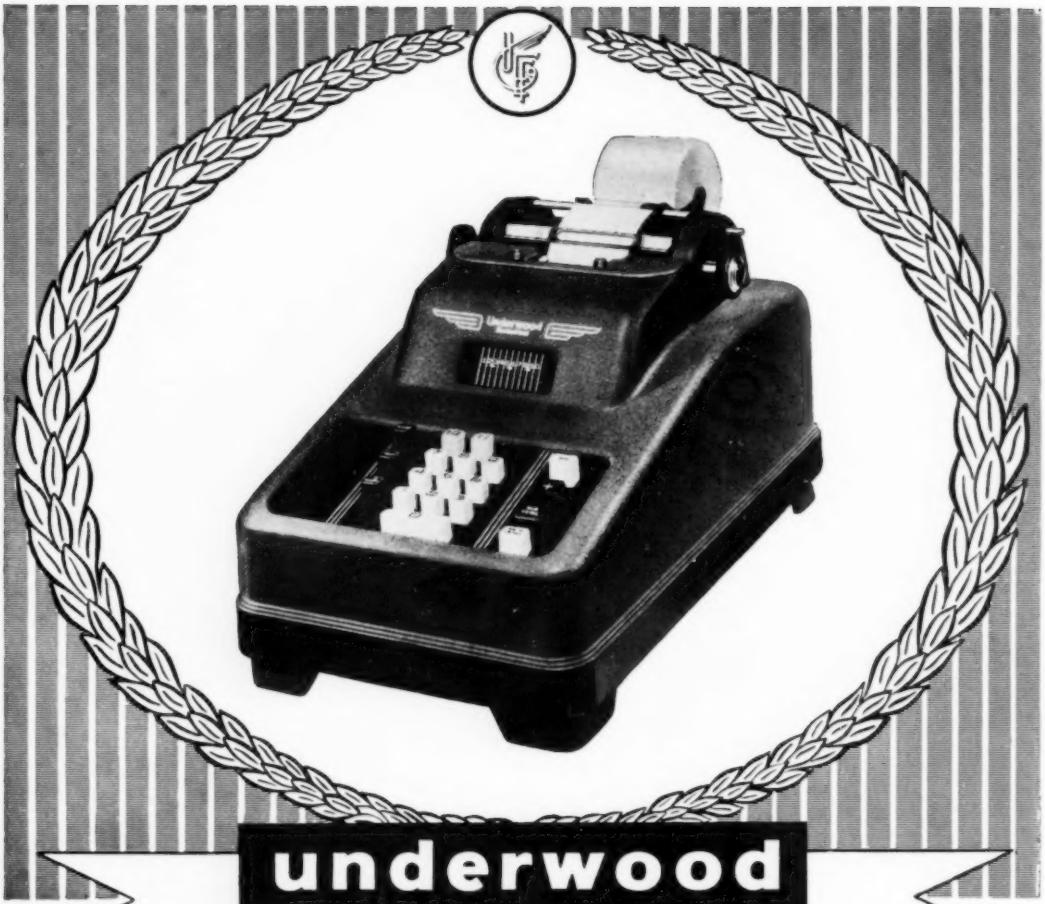
EX-B.E.T.R.O—Roger Falk, O.B.E., lately Director General of the British Export Trade Research Organization, has joined the staff of Production Engineering, Ltd., the well-known firm of management consultants. He will take charge of the marketing side of their organization work.

ROOM 266—Businessmen will welcome the transformation which has taken place in room 266 in Edinburgh's Caledonian Hotel. Carried out by Neil Morris of Glasgow, the room has a dual purpose. Top photo shows it as a sitting room, while below the same furniture is used to change it into a double bedroom. The alterations show how hotel space problems can be solved by using dual purpose furniture. Other hotels please copy.

BRITAIN WINS—A young English textile designer Lucienne Day has won the coveted American Citation of Merit for a printed curtain fabric called Calyx. Judged by the American Institute of Decorators as the best of the year on the U.S. market, Calyx is made by Heal's Wholesale & Export, Ltd., and already over 200 leading American interior decorators have bought it. This is the first time Britain has won this award.



LIFE AFTER DEATH—New product for extending the life of dry batteries—previously thought to be impossible—is the Activette. The unit works from the a.c. mains and is claimed to extend the life of dry batteries by four to six times at almost negligible cost.



underwood

presents

THE UNDERWOOD SUNDSTRAND ADDING MACHINE

The range of Underwood Sundstrand Portable Adding Machines, now becoming available from our Brighton Factories, is designed to handle every variety of Adding/Listing work. It is equipped with the modern Underwood Sundstrand touch operative 12 Key Keyboard, and other basic Underwood Sundstrand features . . . Automatic Column Selection . . . Direct Subtract . . . Automatic Credit Balance . . . Automatic Total . . . Automatic Sub-Total . . . Automatic Non-Add . . . etc., all of which make operation **simple, easy, rapid and accurate.** Supplied for manual or electric operation, with narrow or wide carriage, and in a variety of styles and capacities to meet every individual requirement.

UNDERWOOD • ELLIOTT FISHER • SUNDSTRAND

Speed the World's Business

UNDERWOOD ELLIOTT FISHER LTD., 4-12 New Oxford St., London, WC1 Tel. CHA 3131 *Factories: Brighton, Sussex* *Sales and Service Everywhere*

Increased Exports Can Be Got

THE closing of many traditional British overseas markets represents a challenge to British industry. The need to export remains: the opportunities for easy selling have well-nigh gone. The businessman, as well as the nation as a whole, depends on exports: raw materials and labour are scarce, and must be steered to those working on rearmament or export. There is little opportunity today for the man who restricts his activities to the home market.

TO EXPORT is not easy, but it is not as difficult as all that. An ounce of practice is worth a ton of precept. Here are the stories of five firms. None of them is an economic giant: three have sprung up since the war. Yet in spite of lack of experience and established contacts, they have within a few years built up a very satisfactory export business.

Choose the Right Agents — and Let Them Sell

The local agent knows the market best. But he has got to be good. The Longford Engineering Co., Ltd., ensure the quality of their agents by careful choice and subsequent training.

THE Longford Engineering Co., Ltd., of Bognor Regis, made their first refrigerator as recently as 1945. Yet last year, with fewer than 350 employees on the payroll, their exports—which amount to 80 per cent. of output—totalled half a million pounds.

Longford's export to 95 countries (including Iceland) both commercial and domestic refrigerators, which are sold under the trade name, *Lec*. Managing director of the firm is C. R. Purley, who was the subject of a short biography in BUSINESS in January, 1949. It is in the European market that Longford's do the bulk of their selling, and the methods which they adopted to break into this market are interesting, in many ways unusual, and certainly successful.

When *Lec* refrigerators were first produced in quantity in 1946, it was imperative that export trade be started so that allocations of raw materials, etc., could be obtained. Once decided, Longford's first move was to advertise widely in foreign newspapers and periodicals and in British journals whose main circulation was in overseas countries. This advertising campaign had a twofold object. First, to invite enquiries for agen-

This mobile display van tours the Continent to back up agents' advertising and selling.

cies in various countries; second, to get the name of the product fixed in the public mind. To achieve these ends a considerable amount of money was expended on buying space in all types of publications right down to local newspapers.

When the replies started coming in from prospective agents they were carefully sorted and the most promising ones picked out. Then the managing director, or the export director, visited them personally, using one of the company's two aircraft that are kept for business purposes. The selection procedure is interesting, for it reflects the policy behind Longford's whole approach to selling.

After Sales Service

The first thing to be discovered (after the agent's integrity, soundness and ability had been checked) was whether facilities existed for after-sales service. Believing, as they do, that their best salesmen are the owners of *Lec* refrigerators, they make every effort to ensure that the customer is 100 per cent. satisfied with the equipment he buys. Design, workmanship, materials and finish must all be of the highest quality in the first place, and these must be backed up by a service organization that is so good that wherever the customer may be, he can rely on getting rapid, skilled servicing and repairs at fair prices. This is reflected in the motto of the firm, "Trouble-free refrigeration."

Another point that was checked was whether the prospective agent had good showroom facilities.

Having selected their agents, Longford's then invited the representatives' engineers to the factory at Bognor, where they spent six to eight weeks in the works, seeing how the refrigerators were produced, and having lectures and practical demonstrations on how to repair and service them. At intervals during the course the visitors were required to take tests, and before leaving they had to satisfy the company that they were competent to tackle any job on any *Lec* model. Even this did not completely satisfy Longford's. They expended a great deal of time and effort producing a complete manual for service engineers, written in the simplest possible language, and illustrated with drawings, diagrams and examples, and copies were circulated to all agents.

Longford's had little difficulty in persuading people to undergo this training. The prospective agents were soon infected with enthusiasm for *Lec* products and anxious to become proficient enough to sell and service them. This applied even though nearly all the people they chose had had previous experience in refrigeration.

Selling the refrigerators was comparatively easy in the early days. There was a large unsatisfied demand as a result of the war, and there was no Continental competition, though *Lec* products did have to compete with other British makes that had been well known on the Continent before the war. More recently the situation has changed; not only has the post-war boom ended, but in countries such as Switzerland and Belgium, United States manufacturers have stepped in. Despite considerable increases in the cost of labour and materials, Longford's have managed to avoid comparable increases in their retail prices. This has been achieved by efficient production methods and the introduction of up-to-date machinery. When they decide to carry some increase in production costs, an appeal is made to the workers to increase their output. And because of the excellent team spirit prevailing in the factory the response has always been forthcoming and prices have been maintained at a competitive level. The managing director has made several trips to the U.S.A. to study refrigerator design and manufacturing techniques.

All this may appear to have little to do with exporting, but as Longford's rightly point out, unless you can produce a good product at a competitive price you are wasting your time trying to sell overseas. Their own efficiency is reflected in their sales. In 1949 £84,000 worth of refrigerators was exported, in 1950 the figure was £250,000, and last year it jumped to no less than £493,000.

Agents are left to do their own advertising and marketing, though the manufacturers are always ready to support them in a campaign. In addition, point-of-sale advertising, leaflets and illustration blocks are supplied. Another selling service that has helped agents to increase their sales considerably is a fully-equipped mobile showroom that tours Continental towns and cities, visiting trade fairs, exhibitions, agricultural shows and similar events.

The showroom is a specially equipped, articulated vehicle and contains an example of all *Lec* models. Prefabricated display stands, banners, etc., are also carried.

The van usually carries the name of the nearest *Lec* agent, and when it arrives at the site of a show the display stands, etc., are quickly erected and the public can then walk through the van and inspect the equipment.

Using Air Freight

Air freight is extensively used to effect speedy delivery of supplies to the Continent. Though refrigerators are bulky and heavy, Longford's find that this method of transportation, despite its cost, has many advantages. Because orders can be fulfilled at short notice, large stocks need not be kept overseas, and the risk of deterioration in warehouses is eliminated. Savings are also made in packing, for the refrigerators can be loaded uncrated into aircraft. The prestige value of this sort of service to agents is also considerable.

The firm's own light aircraft are used for twice yearly tours by the managing director, the export director, or the sales manager to keep their agents keen and abreast of developments. Longford's are great believers in this personal contact and they consider it essential.

Because the company are so small they cannot support a large staff of outside representatives, and right from the beginning, even in this country, they have used agents as their method of selling. As the volume of business grew, however, it became increasingly difficult to organize and supervise marketing operations, and so more and more of this work has been handed over to various exporting agents. This transition has been accomplished smoothly, but Longford's still retain an active interest and in some markets they continue to deal direct with agents.

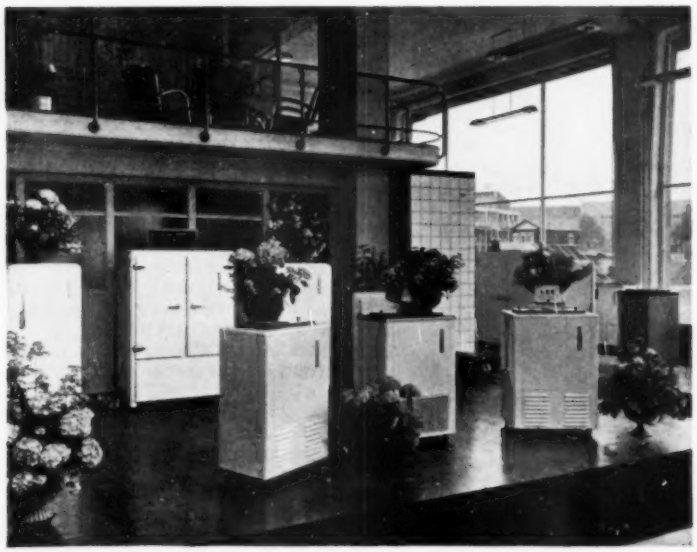
This set-up is typical of their selling outlook, for they refuse to be tied down by rigid, cut-and-dried systems, and are willing to use any arrangement that works and results in increased sales.

Import controls have sometimes hindered the selling activities of the company, but patience and perseverance usually have their reward. Even when a country is not issuing any import licences, Longford's appoint agents and keep in touch with them, so that when licences are issued they are ready to start selling at once—often one jump ahead of their rivals.

Similarly, if the import ban is only on complete goods, an arrangement can sometimes be made whereby the comparatively simple parts of the refrigerators (such as the cases) are manufactured abroad, and only the intricate mechanisms which demand a high degree of skill and experience in their manufacture are sent out from Bognor.

A Six Point Export Programme

1. **Check agent's showroom and after-sale service facilities.**
2. **Show your agents how the product is made; organize factory visits.**
3. **Train agents in after-sale service of your product.**
4. **Leave agents to do advertising and marketing, but**
5. **Support them generously with point-of-sale devices.**
6. **Keep in touch even when import controls prevent selling.**



The showrooms of Longford's Rotterdam agent.

U.S.A.

Case History No. 2

He Sells by Post to American Women

Direct mail means lower prices to the overseas customer—there are no agents' fees or commissions to pay.

THAT dollar selling does not necessarily involve an elaborate export organization is the experience of Rudolf Weyl, a director and general manager of Richard Shops, a subsidiary of United Drapery Stores, Ltd. For Weyl sells by post to Americans who answer his advertisements—a simple method which saves trouble and means lower prices for the customer because no distributors are involved on the other side of the water.

Early last year Weyl crossed the Atlantic to arrange token imports of American dresses and to study American methods of display. During his visit he noticed with some surprise the prices being charged in stores for American garments made from British materials.

He wondered why more finished British clothes were not sold to the U.S.A., and came to this conclusion: if an American store wishes to buy in England, it must place its orders in November for delivery in January or February. A big order would mean a big advance commitment, and this is the very thing buyers in the fashion trade are anxious to avoid. American stores, therefore, tend to place sample orders only—which is also unsatisfactory, because repeat orders take another two or three months to deliver.

Weyl decided that the answer was to go direct to the American public, and last October he placed a four-colour advertisement in the *New York Times Magazine*. This was done through Crawfords Advertising and their New York associates.

The advertisement featured a tweed coat with "the London look," the price of which was only 34 dollars, including postage but excluding customs duty—a figure which was given in the advertisement in order to show the reader that the total price was still far less than that charged for anything of comparable quality on the American market. Buyers were also offered a refund if they were dissatisfied with the product.

Rudolf Weyl examines one of his coats for the American market.

The single insertion cost a considerable amount of money, but the response was so encouraging that the advertisement was repeated. And although it appeared late in the season, it pulled 10 per cent. more business than the first.

In February of this year the campaign was extended still further, and four-colour advertisements were placed in the Sunday magazine editions of the *New York Times*, the *New York Mirror*, the *Chicago Tribune* and in the monthly magazine, *Charm*. These advertisements featured spring garments: a 100 per cent. camel hair coat, and a tartan skirt and shawl—all typical British products, though they were chosen and styled for the American market.

Replies from these and all other American advertisements are acknowledged individually, and the orders are packed and despatched by post. Packing is by normal methods, except that the weight of the boxes has been reduced (without affecting their strength) in order to minimize postal charges. The garments themselves carry a special label indicating that they were made in London by Deréta, the designs being exclusive to Richard Shops.

Once the goods have been despatched, the correspondence connected with new customers is used

to build up a mailing list. People on this list receive leaflets describing additions to the American collection, and each leaflet carries four-colour illustrations, no less lavish than the advertisements. Much depends upon this list and the quality and appeal of the mailing "shots" as a source of future orders.

Weyl had no previous experience of the export trade, and he is naturally reluctant to expand upon the success of this campaign. "We felt we should do our bit to promote exports," he said, "and I think we may claim to have done that. When we have a mailing list running into several thousand customers we shall probably be operating a really profitable export business. That is going to take time, however, and so I would call this export trade of ours a long-term proposition."

Case History No. 3

It is the Unexpected that Sells in the States

Exports to the U.S.A. need not consist solely of whisky, woollens and bone china. Novelty counts, as well as traditional quality.

AMERICAN Presidents do not appear on any Board of Trade export list, but, nevertheless, they do earn quite a lot of dollars for Britain. Admittedly, they leave these shores in the form of wax effigies, and are only part of an order for 2,000 similar historical figures, placed with Gems (Display Figures), Ltd., of Notting Hill, London, by a Florida businessman.

Gems are a family business which have been making display models for over 100 years.

At present the firm are busily engaged fulfilling the American order. A millionaire Floridan has decided to dedicate some of his wealth to the foundation of a gallery to contain 2,000 figures of famous men and women of all ages and nations in appropriate settings. Total cost of the gallery, known as *The World in Wax*, will be 1½m. dollars.

No American firm could produce the figures to the necessary degree of accuracy, so the Floridan came to Europe, and when he saw examples of Gems' work—they had produced some trial figures for him—he gave them an initial order for 60. Making the figures is naturally a slow job (each one takes about three months to complete), but the first batch, including William the Conqueror, King John, Richard Cœur de Lion, and President Theodore Roosevelt, has already been delivered. The detailed and historically accurate costumes, jewellery and decorations for the figures are supplied by L. and H. Nathan, famous London theatrical costumiers. The whole order will take several years to complete, and dollar earnings will average at least 1,000 a month during that period.

Theodore Roosevelt—in wax.

Because the wax images might deteriorate if kept packed up in sub-tropical temperatures, care must be taken in selecting shipping routes. In summer, for instance, the figures must be sent via New York, rather than by the more direct route through the Mexican Gulf. Once arrived at their destination they are safe, for the building in which they are housed is carefully air conditioned.

Small Firm — Large Exports

Mrs. Armstrong does her own inspection.

GOOD PRODUCT design plus direct contact with customers: these are the factors behind the story of a small Midlands company with an export record of which any larger organization might be proud.

Six years ago, Mrs. Patricia Armstrong modelled dresses. Today, she is managing director of Armstrong Spinners, Ltd., of Birmingham, a firm producing aluminium tea sets and other products, up to 99 per cent. of which go abroad.

It was in 1946 that Mrs. Armstrong began to make holloware, with three employees and a plant consisting of a spinning lathe, a polishing spindle and a kick press. Much aluminium holloware, she thought, lacked elegance and was difficult to clean. She determined to design articles which would be more in line with the housewife's requirements.

To make scouring easier, cooking pans have specially rounded edges on the inside base, while a hollow recess around the lid knob permits a firm grasp without burning the fingers.

"Every article I make, whether it is a percolator or a teapot, has no crevices to accumulate stain. Sides and base meet in a curve instead of at an angle," she adds.

Mrs. Armstrong built up her export business by sending letters and samples all over the world; by advertising; by appointing established agents; and by inviting overseas customers to visit the factory. The result: markets in Canada, South Africa, Australia and many other countries.

She wanted to sell in Canada and so, with characteristic directness, she first wrote to "the man at the top of the tree"—the Canadian Trade Minister at Ottawa. A Canadian buyer was invited to the factory—and placed an order worth 10,000 dollars.

Others who have visited the factory and placed direct orders include buyers from the United States, South Africa, Peru, Australia, Transjordan and the Continent.

To day Armstrong Spinners employ up to 60 workers. Between them they have produced over a million pieces of aluminium holloware. Yet Mrs. Armstrong continues to inspect all the finished items personally, for her aim is to maintain quality as well as improve the quantity of production.

After-Sale Service is Vital in Machinery Export

Conditions in overseas markets—particularly in the tropics—are so vastly different from those in Britain that an exporter must see them for himself and adapt designs accordingly

CLEAN CROPS, Ltd., are a small firm and a young firm. They were formed in April, 1951, to produce and market a new type of agricultural sprayer invented by Edward J. Bals, the managing director. Development work took up considerable time, and it was not until November last year that the first standard production models were available for export. Since that date, operating on the slenderest of resources, without a single paid advertisement, he has booked export orders for over £15,000. These are, moreover, for the most part trial orders; as soon as the tests are completed, Bals expects orders to mushroom to many times that figure.

Bals first came into contact with the Far East before the war. From his own experience he knew the toll that pests and diseases took of the tropical crops of this region; he knew, too, that insecticides and weedkillers were the answer if they could be applied. But labour is scarce, even in the Far East, and existing mechanical sprayers were not wholly satisfactory. So he invented his own.

It was natural that he should turn to the Far East for his first markets, and think in terms of tea, coffee and rice cultivation. He took a prototype of the sprayer to Ceylon, demonstrating it to research stations and estates.

This personal demonstration he considers vital. "If you have a machine to sell in the Far East," he says, "take it out and see it working on the spot. Then you will be able to find out what is wrong with it. Conditions out there—climate and terrain—are so vastly different from anything you will encounter in Europe that it is impossible to envisage them without a visit. You may read all the reports that you can get hold of, but you will still not have the remotest idea of what a monsoon can mean to a machine."

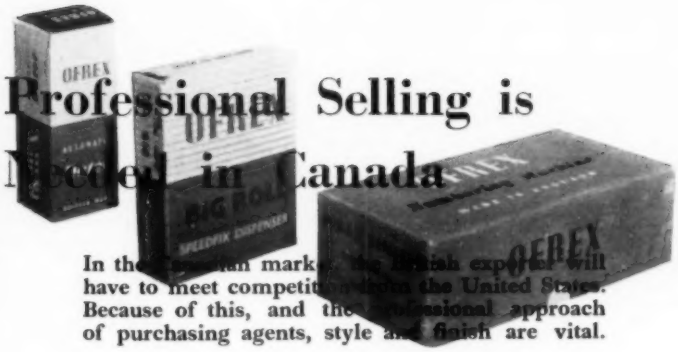
Most of the agents to whom he showed his sprayers he already knew. Where he did not, he knew what he was looking for—large old-established concerns, with a long knowledge of the country and its inhabitants, good connections with government and estate circles, and—above all—sound financial backing. "You can find slick cheapjack salesmen in plenty," he says, "who will probably give you a bigger turnover in the first year. But when trouble crops up they cannot give the customer the service he wants—and service to the customer is a vital part in selling machines. The old-established houses have been built up on service."

Having appointed his agents, Bals left the job of selling very much to them. Direct advertising was negligible and was limited to individual approaches to agricultural research stations and similar bodies on a strictly scientific basis. But even good agents need keeping up to the mark, and eventually Bals hopes to appoint a special roving commissioner to cover the whole of the Far East, to visit periodically every agent handling his sprayer, and to keep in touch with research stations, planters' associations and so on. In the meantime, he does this job himself; last year he flew to India and Ceylon, and this year hopes to visit agents in Australia, India, Malaya, Siam, Indonesia, Pakistan and Ceylon.

Bals regards his initial success as but a beginning. The Far East, he thinks, offers an almost unlimited market for Western agricultural machinery.

Nor is the capital lacking; existing planters are prepared to spend money on protecting their crops. Bals would like to see the Food and Agricultural Organization spending money on opening up areas still uncultivated, and is hopeful of some international action in this direction. Indeed, to some extent it is already taking place; the Desert Locust Survey, an international body, is his largest single customer, and is using his sprayers in locust control. The sprayers can cover two acres a minute with less than a gallon of concentrated insecticide giving a complete control.

Edward Bals demonstrating the original prototype of his sprayer at Fernhurst (left) and the production models (right)



Professional Selling is Needed in Canada

In the Canadian market, the British exporter will have to meet competition from the United States. Because of this, and the professional approach of purchasing agents, style and finish are vital.

Case History No. 5

CANADA is acknowledged to be a difficult market to break into regardless of the commodity you are selling. But it can be harder with some products, and within this category come office supplies and self-adhesive tapes, for competition from Canadian and the neighbouring U.S. manufacturers is keen and fierce.

The achievement of the Ofrex Group of companies, manufacturers of stapling and numbering machines, cellulose tapes, typewriter ribbons, stencils, carbon papers, and other classes of "office sundries," is, therefore, all the more impressive.

Starting from scratch at the end of the war, the Group have now broken into this $20,000,000 a year market to the extent of obtaining between 5 and 10 per cent. of the available business with each major line they sell. Last year they exported to Canada more than the rest of this country's office supplies industry put together, and had no fewer than 15,000 Canadian firms on their order-books.

How did they achieve this? During the war a trickle of goods had been sent across the Atlantic and sold through a Canadian firm which acted as their agent. Ofrex decided that as soon as the war was over they would concentrate on expanding their exports, and that this trickle to the important Canadian dollar markets should become a flood. The armistice in Europe had been signed less than a month when George Drexler, M.S.M.A., the founder, chairman and managing director of the Group, set off on a tour of North America. First he went to the United States and spent some weeks studying the latest developments and designs produced by the U.S. industry during the war years. Then he turned his attention to Canada. Dissatisfied with the methods used and the results achieved by the agents, he tried to get them to make an increased drive and suggested several schemes for increasing the volume of sales. Before returning to Britain he made an extensive coast-to-coast tour, meeting manufacturers, potential customers and studying Canadian methods and needs. What he learned convinced him that, in spite of local competition, tariffs (from 10 to 22½ per cent. on office supplies), transport and supply difficulties, his companies' products could be sold competitively in Canada.

During the next year sales increased, due to the temporary post-war boom, but they soon began to decline again. Because of this, and because using distributors was making the prices of Ofrex products too high, the decision was made in 1946 to set up an organization in Canada to promote and handle all sales to that country. A skeleton staff, including a sales manager, a sales accountant and salesmen, was trained in this country, and Mr. Drexler went out with them to open the first office of Ofrex (Canada), Limited, in an old garage in Toronto, rebuilt to serve as offices, warehouse and showroom.

Thus established, the sales force went to work, visiting office users and selling by the direct method. At first the going was tough and they had to learn the hard way. Some of the products they were trying to sell were unsuitable for the Canadian market, and in those early days large consignments of products had to be shipped back to Britain at heavy loss. Carbon papers, for instance, that were good quality and sold well in this country, failed to interest Canadian buyers. Climatic conditions imposed severe strains on some products—in the northern territories the temperature is often so low that some types of cellulose become as brittle as glass. Ofrex soon discovered, too, that although the quality and price of their stapling and numbering machines compared well with Canadian and United States products, their styling and finish did not. Back in England, the company's designers produced a new range of models on the American pattern;

A large billboard at Toronto; note the bilingual approach.

these, however, were not slavish copies, for, as Mr. Drexler says, "Why should people buy our products unless we can offer them something different, in quality, price or design? Whilst our machines were redesigned to suit Canadian tastes, they still retained a character that was essentially British."

Further difficulties over sizes were met and overcome. Dimensions of American staples differ from those used in Britain, so machines and refills had to be altered; Canadians also wanted rolls of tape in their own standard widths and lengths; they got them. Many of these alterations were incorporated with advantage in machines and products for the home and other export markets.

Ofrex soon discovered that their packaging fell far below American standards. They were fortunate, however, in having facilities within their organization in this country for designing advertising and display material, and a complete new range of catalogues, price lists, boxes and leaflets was produced in keeping with standards established in Canada. Designs were modern and colours bright enough to suit the North American eye.

Undismayed by their early setbacks, Ofrex persevered in their efforts. From their hard-won experience of selling to firms in Canada, they can now demolish some of the popular fallacies that surround the buying habits of Canadians, and can substitute more reliable information for them. High-pressure selling has long been associated with American marketing. "It does not exist —at least in the commercial field," is the rather startling verdict of Mr. Drexler. "The Canadians handle buying more professionally than we do, and instead of leaving it to a clerk or the secretarial staff to order carbon paper, etc., as so often happens in this country, even quite small organizations have an experienced buyer to handle such matters. What is needed in Canada, therefore, is *professional* selling."

The buyer considers it his duty to see salesmen, so there is rarely any difficulty in getting an interview. Conversely, this system means that the buyer is an expert, familiar with market conditions and the services and prices being offered by competitors. Unless the product is good and the price right, no amount of smart sales talk will carry any weight.

The informal friendliness of Canadians can easily lead the inexperienced astray—as the Ofrex salesmen found. It does not follow that because you are on friendly, even familiar, terms with a buyer, he feels under any obligation to give you an order. This friendliness is an accepted part of business life in Canada, and Mr. Drexler found that even his competitors were willing to see him and discuss difficulties and problems, and even to offer help and advice.

As their initial snags were being resolved, Ofrex went ahead with the recruitment and training of a Canadian sales force to such good effect that within 18 months of their arrival in Toronto other offices were opened in Montreal, Vancouver and Winnipeg, and Ofrex (Canada), Limited, was established from coast to coast.

The vast distances separating these cities presented the company with another problem—one that faces all firms that seek to establish themselves on the North American continent. The area of the Province of Ontario alone is three times that of the entire British Isles, and goods have to travel 3,000 miles from Toronto to Vancouver. This journey takes five days even by expensive express

Continued on page 128

7 Points on the Canadian Market

1. **There are many peculiarities in the market, and first-hand study is essential before embarking on distribution.**
2. **A product must not only be efficient, it must look it, before it gains acceptance.**
3. **Price is a vital factor; price-cutting wars are not uncommon in the Canadian market.**
4. **Customers demand a complete service; establishment of a permanent organization is essential.**
5. **Choose your personnel carefully. Nationality does not matter, but they must know the Canadian approach.**
6. **Keep your selling campaigns personal, fluid and well timed.**
7. **Always back your selling with adequate stocks.**

A carbon paper box with a hinged lid and a selling leaflet emphasize the slogan 'Gems from Britain'.

MANAGEMENT AT WORK

Efficiency from Statistical Methods

IN A RECENT address on "Maintaining and Improving Efficiency in London Transport," given to the Institute of Public Administration, Lord Latham, chairman of the London Transport Executive, stressed the important part played by statistical methods in improving and controlling efficiency.

A whole gamut of statistical controls had been evolved, largely by the late Frank Pick, which, though modified and improved in the light of later experience, still provides the basis of many of the methods employed today to keep check on performance in all branches of the undertaking. In particular, a scientific service has been set up which, while independent of any particular department, works in close collaboration with each on statistical problems.

Fuel Consumption Cuts

On the engineering side, for instance, much work has been done on fuel economy. In the days of the petrol bus the introduction of standardized carburettor settings reduced fuel consumption. But it then became necessary to ensure that these economies were maintained. The scientific service took over the problem and developed a system of control based on the analysis of the composition of engine exhaust gases. Many thousands of samples were taken during the course of a year, and the analytical data correlated with the performances of the buses in actual service. Statistical analysis then deduced standard performances that might normally be expected, and it became possible to direct attention rapidly to vehicles which were not conforming to these standards.

Today the research has switched to Diesel oil and lubricant consumption, and similar methods are being used to secure the maximum economies possible.

Lord Latham mentioned two current investigations. Electric power consumed by trains varies considerably from year to year and between lines. No one knows why, and a team is trying to find out. Driving techniques on road vehicles have different effects on fuel consumption, but the relative nature and intensity of these effects remain obscure. Another team is examining them in detail. The results obtained from these two investigations may well form a basis for action that will secure further economies in the use of power and fuel.

COMPRESSED AIR BLOWS UP OUTPUT

LAST OCTOBER, BUSINESS described how R. W. Mann, managing director, Victor Products (Wallsend), Ltd., had increased the output of his company by 60 to 70 per cent. in nine years, and hoped to achieve increases of 100, 200 or 300 per cent. Some of the methods he is using, introduced since our article, were described by A. Cameron, A.M.I.Prod.E., his works' director, in a paper read to the North-Eastern Section, Institution of Production Engineers.

Two technical innovations that have had a remarkable effect on productivity have been carbide cutting tools and compressed-air-operated tools, jigs and fixtures.

(Continued Overleaf)

THE USE OF models for the reorganization of factory layouts, advocated last month in BUSINESS, has been taken a stage further by Achille Serre, Ltd., the dyers and cleaners. The models are used not merely by management, but also by the workers themselves.

Recently, a number of discussion groups have taken place around a scale model of a unit (made in the carpenter's shop), including all the machines and other equipment used in carrying out customers' instructions. Operatives were called in groups to express their opinions of the operation of the unit, and to make suggestions for improving the rate of output. They moved the models about to conform to what they considered a better layout, offered new ideas regarding methods of operation, and pointed out ways of increasing efficiency. From these discussion groups, some original and valuable suggestions have emerged that have been adopted in the works with success. Similar groups discussions deal with most of the departments individually.

This is but one aspect of a far-reaching training scheme described in detail in the March issue of our associate journal *Personnel Management, Welfare, and Industrial Equipment.*

The old layout of the stores (left) and the new (right).

IN JANUARY, 1950, BUSINESS described a new system of classification, which had just been introduced by a number of firms, including the Union Works at Wembley of the General Electric Co., Ltd. Now, after two years' operation, this firm report the system as an unqualified success.

Redundant stocks have been reduced by 30 per cent., about 50 per cent. more material can be stored in the same area with better handling facilities, and the number of items issued per day has increased by 250 per cent., with one less storekeeper than before.

The works manufacture a wide range of electrical products, for which a considerable variety of materials used to be purchased and stored. Over the years, a relatively large number of types, grades and sizes of materials, mostly metal sections, were acquired, which gradually resulted in an accumulation of idle and redundant stocks.

As materials became scarcer and stores control more difficult, the management introduced the Brisch system to (1) eliminate unnecessary variety in materials, and (2) record, arrange and control necessary variety. The redundant stocks revealed by the introduction of the system have been exchanged for standard materials or, where appropriate, redrawn to standard sizes.

The storekeeper's job, too, has been simplified, so that unskilled labour is now employed. The storekeeper's memory and knowledge are no longer significant factors in the daily business of the works.

The company were concerned whether the effect of improved operation times had increased the fatigue of the operator. They decided to introduce compressed air equipment to lighten the load.

Operators' Suggestions

The first essential was the provision of a compressed air point at every machine in the machine shop and every vice in the assembly department. The next step was to equip all chucking machines with a short cycle with the air chucks. Finally, a section of the tool room personnel was trained in the adaptation of compressed air equipment to jigs and fixtures. These tool makers were then given the task of improving existing methods on these lines.

"The results achieved exceeded all expectations," said Mr. Cameron. "The men concerned became compressed air enthusiasts. Not only did they provide power-operated fixtures, but in the process ideas emerged which resulted in improved techniques and increased productivity. Suggestions as to possible applications began to come from the operators actually using these tools. This served as a pointer towards the results that could be obtained by training skilled craftsmen to a technique and concentrating their efforts on its application. The new methods, allied to the years of experience which these men possessed, paid big dividends."

TELLING THE LOCALS

HOUSE ORGANS are now so common as to have become stereotyped. One firm that have found a new angle are Blackstone and Co., Ltd., of Stamford, manufacturers of oil engines and agricultural machinery. Instead of producing a separate journal, the firm are now taking a whole page, at ordinary advertisement rates, once a month in their local weekly journal, the *Lincoln, Rutland and Stamford Mercury*.

Headed "Blackstone News," the page is split into six columns and set in the form of an ordinary news page. The first issue gave details of the Blackstone stand at the Toronto Exhibition, staff news, including sporting events, personality paragraphs and other items.

PERIPATETIC OFFICE

PORTABLE MAGNETIC recording instruments are being increasingly used by businessmen travelling by car to send communications back to their office. The record—tape, wire or disc—can be sent through the post and transcribed on arrival.

The logical conclusion of this development is now being carried out by the Ford Motor Company in the United States. The new Ford Lincoln Continental will, it is stated, include on its instrument panel a telephone, a recording machine, and an automatic jack lever. Production is scheduled for next year—if materials are available.

22,348 SUGGESTIONS

MANAGERS whose suggestion schemes are not producing ideas will be interested to learn that Kalamazoo, Ltd., of Birmingham, have just received their 22,348th suggestion. It came from a man with 24 years' service with the firm, who noticed that, in the packing of carbon papers, two boxes were often used where one modified box would suffice.

He suggested this economy, and has now learned that the adoption of his idea will mean a saving to the firm of £200 in six months. Under the rules of the scheme (and this may, perhaps, explain its success) the worker will receive half this amount.

Left, Moses Jacobson.
Centre, Lionel Jacobson
Right, Sydney Jacobson.

Personal Contacts Built this Business

By BRIAN CUMMINGS

Moses Jacobson did not believe in "efficiency". But that did not stop him and his two sons from building up a single back-street shop in Newcastle into a nation-wide business employing 3,400 workers in 5 factories and 50 shops. For they built on knowledge of people —customers and staff— rather than on textbook methods.

IN modern business the accountant, the production engineer and the time study expert are preeminent. There is a constant search for facts and figures that will make sure of a given result. The subject of this article—the Jacobson family, who founded and manage Jackson Associated Manufacturers, Ltd., the firm trading under the name of Jackson The Tailor—belong, in the context of present-day industrial administration, to the minority who do not conform. For although they run a large and highly profitable business, they do not believe in efficiency—at least, not the kind of "efficiency" which can only be measured on a slide rule or shown in a balance sheet.

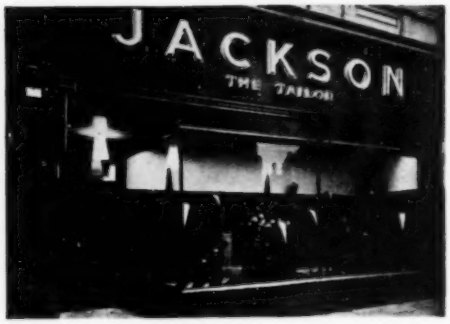
Jackson The Tailor is a north country firm, which has recently spread into London. By the standards of modern multiple tailoring concerns, it is not a large organization, even though it does employ 3,400 people in five factories and about 50 branches. It is, moreover, misleading to compare the firm with the big multiple tailors, for the whole essence of the business lies in personal service to the customer, and a very real attempt at maintaining individual craftsmanship on the manufacturing side. Jackson The Tailor really exists in the person of one of the joint managing directors, and he is there to serve *you*, the individual.

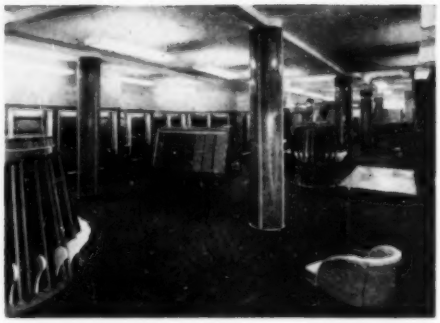
The company was founded by Moses Jacobson, who came to England by way of America. He was brought up in a hard school. After an unsuccessful venture in America he agreed to join his brother in a small tailoring business in Newcastle. Almost at once the two personalities clashed. There were differences in policy, and Jacobson, Senior, started his own business. The place he chose was Clayton Street, which was then regarded as a poor business area.

His policy was to offer all his suits at one price—30s. Considering that suits could be bought in the streets for as little as 19s. or 20s., this was a good price. However, the aim was to do business with skilled workers, rather than labourers, and he was prepared to offer a good product for the money.

In some ways he was lucky. His first years in business were also years of prosperity in the North-East. Coal mining and shipping were booming, and very soon the young immigrant had a large following among the artisans. Meanwhile, some interesting changes were taking place in the tailoring industry at large.

Before the first World War multiple tailoring was in its infancy. There were a number of firms with 50 or 60 branches, but nobody had realized the possibilities of mass production. This development





Top left, the original shop at Newcastle.

Top right, a modern branch shop at Leicester.

Right, the showroom at the new Oxford Street branch in London.

took place after the war and was probably due to three factors: (1) the expansion of factories for all kinds of war production, including clothing; (2) the availability of these factories, following the end of the war; (3) the fact that men who had been demobilized were given money with which to buy civilian clothes. Moses Jacobson did not take part in these changes—at least, he did not follow the crowd; he led them in his own individual way.

By 1928 he had been joined in the business by both his sons, Lionel and Sydney, but he still had only 12 shops and one small factory in Leeds. Lionel—who is now chairman and joint managing director—thought this was due to the character of his father. "He was not the administrative or executive type," he said. "More than anything else, he wanted to maintain personal contact with his customers."

The Business Spreads

Lionel Jacobson had been given a first-class education, as a result of which he had taken his M.A. and qualified as a barrister. To the problems of commerce, therefore, he brought a mind trained in analysis. And what he saw led him to suggest a change which was to condition all the future development of the company. "As I saw it, the weakness of our business was its concentration in one area—the North-East," he said. "The year in which I joined the business was quite a good one, but there had already been one disastrous dispute in the coal industry, to say nothing of the General Strike in 1926."

The answer to their problems was to spread the company's selling interests into more prosperous parts of the country. It was further suggested that the manufacturing side should be extended to Gateshead. At that time the firm had branches in Middlesbrough, Stockton, Sunderland, Newcastle and Edinburgh. Production in Yorkshire was, therefore, ridiculous, a waste of administrative and transport charges—or so it seemed to the brothers.

In those days such a move seemed revolutionary—so revolutionary that several manufacturers went to Moses Jacobson and tried to prevent him taking what they regarded as a disastrous step. Other firms had tried and failed, they said. It would be impossible to make a decent suit because there was no skilled labour outside Leeds. "It was a difficult time for my brother and myself," said Lionel, ruefully.

Nevertheless, the brothers prevailed. A works was established in Gateshead and a nucleus of key workers was taken north from the factory in Leeds. To begin with, everything seemed to be going according to plan. Then, after a very few weeks, Lionel began to worry. To him, the quality and quantity of production seemed unsatisfactory. Concerned about the whole project (by which he stood to make or mar his reputation), he went to his father, who promptly put him in charge of the factory.

Lionel was horrified. He knew very little about running a works, and even less about tailoring. However, his father had made the decision, and he had to get on with the job. On arrival at Gateshead he found that the skill and knowledge of the workers was running to waste. His first action, therefore, was to call together the foremen and key workers and explain his point of view. He told them what he was going to do and asked for their help. They responded at once, and from that day to this the factory has prospered.

The success of the Gateshead factory spread abroad, and other clothing manufacturers asked to see the plant. And in due course, when the trading estates were organized, it was noticeable how many clothing factories were established there. "We had a double influence," said Lionel. "First, as a result of our success, the area became a centre for heavy and light clothing production. Secondly, it was only *after* our success that the big multiple tailors begin to develop factories

Top Left, women workers at the Leeds factory.

Top right, men employed at the Gateshead factory

Right, finishing garments at the Leeds factory.

all over the country. And remember that in those days we had no Government assistance—we had to find all the capital ourselves."

Within 18 months the Gateshead factory had to be doubled in size, and within three years the Leeds factory had to be re-opened in order to cope with the flow of business. When the decision was made about Leeds, the people who had opposed the move to Gateshead told Moses Jacobson that he was mad to come back. By this time there was a shortage of skilled labour in Leeds, "and," they said, "you will never get the people you need." They were wrong again. When the decision was made to go to Gateshead, the Jacobsons had offered all their Leeds workers the option of going with them or taking four weeks' salary. Originally, it seemed generous, but in truth it was a case of casting bread upon the waters. For when the time came for the return journey there was a queue of applicants for jobs in the Jacobson factory—many of them people who had worked for the family three years before.

The Sons Take Over

Moses Jacobson died in 1939, leaving behind him a prosperous business and an enormous fund of goodwill among customers and staff. By this time there had already been a rough division of responsibilities between the two sons, Lionel making himself responsible for sales, while Sydney took charge of production. It was Sydney who persuaded his father to build the present factory in Leeds, which offers excellent conditions and attracts the best type of worker. He, too, was responsible for launching a comprehensive health and welfare scheme. Nurses, as well as doctors, are chosen personally by him for the important reason that they also act as welfare officers—inspecting canteens, kitchens and toilets, and —most important of all—dealing with cases of hardship resulting from financial worry, trouble at home and so on. These days no one can provide for the unforeseen, and so if a worker is short of money the sister applies confidentially to the factory accountant and they decide between them how much shall be advanced.

To the health and welfare scheme has now been added a pension scheme, which covers all executives, managers, branch staff and key workers on the manufacturing side.

As to the manufacturing techniques themselves, a Jacobson factory is a living paradox. "You cannot clothe a man on conveyor belt methods," said Sydney. "We have not a single conveyor band in any one of our factories. We use divisional labour and unit labour as little as possible. We 'make through' by the old-fashioned methods, cutting all our suits—even the ready-to-wear garments —individually. We appear to be behind the times, and yet we make our suits as cheaply, or more cheaply, than anyone else. We are efficient in our inefficiency. Why? Because we produce the suit and the cloth to satisfy the customer, and if he is not satisfied we shall soon know about it. Because we believe, as our father believed, that every customer and every employee has his own character, which it is our duty to serve or develop."

All this carries its own implications for the manufacturing side. It means that suits must be cut from no fewer than 829 patterns in order to produce the clothes the customer wants—and that leaves out of consideration coats, sports coats and women's garments. It means that a great deal of responsibility rests on individual managers, whose authority is only limited by one thing—the right of dismissal, which is vested solely in the Jacobsons. It means also that the Jacobsons have had to work out their own particular attitude to the question of training.

It is, of course, unusual. "We tried holding classes," said Sydney, "but we abandoned them. It's so easy to bore youngsters by trying to demonstrate things in the abstract. Since most of our re-

Jacksons pay considerable attention to welfare both at Gateshead (left) and Leeds (right).

cruits come direct from school, it is relatively easy to *show* them how to do it, to let them make their own experiments alongside an experienced and skilled worker. And believe me, we feel a sense of responsibility towards these people. It is part of our philosophy that if workers are to get more money they must earn it. Therefore, it is our duty to teach them *how* to earn it. We don't say, 'Here is some cheap labour; we will get what we can out of it.' Once they reach the appropriate age or degree of skill, they get at least as much money here as they would anywhere else. That is why so many of our workers stay with us; it is one of the reasons for our very low labour turnover."

Retail Heresies

On the retail side, Lionel committed his own trade heresies. Branches were opened in Glasgow and the Midlands, but the expansion was never planned, except in so far as the firm went to the prosperous areas and expanded out of its own resources. Each year two or three new shops were opened—shops which the firm could finance without noticing the strain, shops which the family could manage personally.

Perilous changes were made in the class of trade sought by Jackson The Tailor. Up to 1929 all the business had been done with artisans who bought one suit for "Sunday best," then used it for work when it got shabby. The Jacobsons had no wish to lose this trade, but they did want to cater for a better class of customer as well—the type who would buy two suits a year. They also sought the trade of the young man who was more fashion-conscious—and in this there was no playing for safety.

To meet these changes the Jacobsons obtained different types of cloth, altered the cut, modernized the shop fronts and interiors, changed the style of window dressing, retrained the assistants, and modified the advertising.

Enough has been said to show that in the years that they worked together Moses Jacobson and his two sons achieved perfect understanding. And this is certainly an important reason for their success. To quote Lionel again: "We achieved unity of direction. During the years that my father and my brother and I worked together we never had to take a vote at a board meeting. If there was a difference of opinion, it was argued out. If a minority view remained, then the person who held it was no less loyal than the others in carrying out the decisions made. That is still true to-day, even though we are a public company."

Both Lionel and Sydney Jacobson are strongly opposed to the control of a business by what they call impersonal factors. For this reason budgetary control and statistical departments are curtailed, while the brothers strive to keep out of the welter of paper work which characterizes so many organizations. Obviously, efficient systems are employed, but they are never allowed to become more important than the people who work them.

Lionel literally trains himself *not* to remember figures. "Somebody else prepares those," he says. "They may guide me on policy—and then again, they may not. I believe there is such a thing as *flair*, and that those who succeed often do so against the tide of opinion and evidence. *Flair* is based on experience and instinct. You can acquire the experience, but you must be born with the instinct."

Keeping in Touch

One consequence of this is a general delegation of authority, to which brief reference has been made. This means that sections and individuals must stand on their own feet. Important decisions may be referred to the board, but even then the individual is generally expected to give his advice and make his own recommendations. Here the Jacobson brothers paid tribute to the work of their fellow-directors and executives, without whose loyalty and initiative the enterprise could never have reached its present dimensions.

Labour disputes are practically non-existent for the simple reason that grievances are referred direct to one of the two brothers. There is an annual conference of managers, display staff and area managers, at which all the problems of the year are thrashed out, and the chairman invites "every brick they like to throw." This conference is followed by another one between the manufacturing side and the selling side, at which suggestions are made and policy is hammered out for the next year's activities. During the year the chairman maintains close personal contact with all the branch managers. For the rest, liaison is maintained by the executives on

Continued on page 121

An Important Survey

Joint consultation is still a matter of trial and error—there is no golden rule for success. A new survey charts the successes and failures of joint consultation in over 700 firms.

How 700 Firms Consult Their Workers

By PHILIP F. DYER

THE MERITS of joint consultation as a solution for our industrial ills have been widely canvassed in the last decade. In practice, some businessmen have adopted it and secured startling improvements in output and productivity. Others, coerced into using it by outside pressure, have been less successful. And many others still remain unconvinced that joint consultation can offer them any benefits.

The time had come when evidence was badly needed on how far joint consultation had gone in Britain, and how far it had been successful in solving the problems of management. The results of a comprehensive and authoritative survey[1] have now supplied this evidence.

There were two main stages in this survey. In the first, research workers paid 157 visits to firms known to have joint consultation schemes, and had 4,500 interviews with managements, workers' representatives, shop stewards and trade union officials, and rank and file workers. On the basis of the information obtained, a questionnaire was then worked out and sent to 4,719 other firms; of these, 751 replied, of whom 545 operated joint consultation. Finally, more detailed studies were made in four firms.

The investigators, however, were not concerned merely with an overall picture; they wanted to discover the essential factors that went to make a successful scheme. They, therefore, worked out a system by which the success of a particular scheme could be assessed, and divided the schemes they had investigated into three grades. By comparing and contrasting the two extreme grades they were able to make valuable generalizations.

The multifarious factors behind joint consultation are complex and imponderable; that they are fundamental, however, is obvious. They fall into three main groups: psychological and social, economic and technical, and structural and procedural.

Psychological Aspects

The most obvious factor is the amount of support given to joint consultation by individuals, and analysis shows that this declines from the chief executive, through successive stages of management, to the rank and file, only about 40 per cent. of whom express active support. Workers' representatives and shop stewards are more enthusiastic. The reaction of the remainder is mainly that of passive acquiescence; active resentment was met rarely, though it is significant that it occurred more often among foremen than among all other groups together.

But enthusiasm alone is not enough to ensure success. Different individuals have different ideas as to the purpose of joint consultation. One man sees it merely as a device to get workers' ideas on production problems; another as an outlet for workers' grievances; another as a system for the democratic organization of industry. Each will work enthusiastically to make the scheme a success, but unless their purposes can be defined and reconciled, they will be working at cross purposes, and their efforts will be doomed to failure.

But the attitude of a member of a firm to joint consultation is not determined *in vacuo*. It is affected by many different considerations. The existence of a single dominant individual, either manager or shop steward, may ultimately determine the success or failure of a scheme. The relations between the management and the trade unions will have an important effect on the attitude of both managers and men. So, too, will the pattern of leadership within the firm. And finally, the way in which joint consultation is first introduced may determine whether it will succeed.

To the complexities of the psychological aspect must be added equally complex technical and economic considerations. The size of a firm or a factory, the nature of the product and the process, the interest or boredom of

[1] *JOINT CONSULTATION IN BRITISH INDUSTRY. A Report of an Inquiry Undertaken by the National Institute of Industrial Psychology sponsored by the Human Factors Panel of the Committee on Industrial Productivity. Pp. 276. Staples Press, 21s.*

the work, the proportion of women employed, the organization of the personnel function, the commercial conditions within the industry as a whole, the pay system employed and the existence of bonus incentive schemes, will all have their effect on the success with which joint consultation can function.

Finally, the actual structure of joint consultation may affect its success; the form adopted successfully by one firm will probably be unsuitable for another.

The problem is to decide which of all these interrelated factors are the keys to successful joint consultation, and, as a pre-requisite, to decide what is meant by success.

The survey uses four yardsticks to measure success: the adaptation of the individual (senior executive, manager or worker) to the firm; the establishment of satisfactory working relations between different groups within the same firm; the establishment of a sense of common purpose between all members of the firm; and the extent of contributions from all levels to the solution of production problems. The system of assessment used is necessarily arbitrary and, therefore, open to criticism, but there will be few critics who can suggest any better method.

Having made their assessments, the investigators then consider what common characteristics the sheep have that are lacking in the goats. A detailed analysis is made of the different types of problem that joint consultation in practice has tackled, and of the comparative success achieved with each type of problem.

Finally, there are two important chapters on what successful joint consultation means to workers and to management respectively. Here is no statement of *ex cathedra* general principles; the general principles are there, but they are careful deductions from the evidence of joint consultation in action, generously supported by the quotation of individual case histories.

The workers' initial attitude to joint consultation is fairly simple. For the most part, it is one of sheer ignorance. Where it is not, they regard consultation simply as a mechanism for airing, and securing redress of, grievances, and judge its success or failure on these grounds alone.

The attitudes of management are more complex. A vital factor would seem to be the reaction of foremen; the most successful schemes encountered in the survey were those which had been designed so as to secure the fullest support and participation of the foremen, while of the failure many had been wrecked by apathy or opposition at foremen level.

So far as middle management was concerned, the successful schemes were those in which there was active and regular consultation within this level. This implies a satisfactory co-ordination of functional and executive responsibilities, which can only be obtained (but all too often is not) by good organization.

Finally, the attitude of top management must be one not merely of active support—though this is, of course, essential. A far-reaching revision of the normal conception of business leadership is also called for, and a voluntary surrender of arbitrary control. The key word here is arbitrary; of two firms that had taken joint consultation farthest, the report says: "Management still managed, but what had been changed was the way in which management had decided to manage."

The most important lesson would seem to be that "there can be no one best form of structure and procedure for joint consultative machinery." The most successful schemes are those which have grown organically from some existing pattern of management-worker relationship, fostered by an open mind as to how far and in what form joint consultation can and should develop.

The reader of this book will not obtain a ready-made blueprint for his joint consultation, but he will learn a lot about handling people —including himself. For this reason the book should be required reading for all businessmen. But it is more than that. It is extremely well written and, above all, manages to avoid completely the jargon so beloved of the social scientist. It is even witty, as instance the case quoted of the workers who expressed their opinion of a scheme foisted upon them by electing as their representative a deaf-mute.

Consultation Quotes

"THE ATTITUDES to joint consultation of senior management constitute the most important single influence upon the effectiveness of joint consultation. Without their agreement no system can be started and without their support no really useful development is likely to take place."

"FORMS OF joint consultation appear to become most quickly established where they have been evolved from existing relationships and from informal structures."

"IT IS OF vital importance to gain the intelligent support of the middle management and foremen groups as well as that of the senior management and of the workers."

"IF THE members of the organization are to realize that the problems of the senior management concern them also, they must be involved in the solution of them. The solution should always be left with the lowest level at which it can be made."

"THE COMMUNICATION of information appears to be one of the most rewarding and appreciated functions which a senior management can perform".

"THE FIRST requirement of joint consultation, so far as the worker is concerned, is the development of the consultative relation in the primary working group, between foremen, charge hands and operatives."

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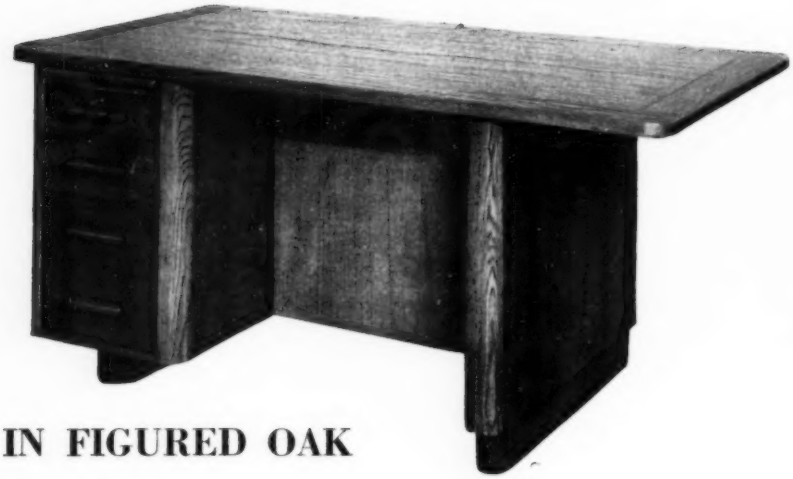

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BIF HIGHLIGHTS 1952

Complete Alphabetical Index of Exhibitors

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ABBOTT BROS. (SOUTHALL), Abbess Wks., Southall, Middx. Southall 1357. Stands F.67/71.
Abbess wooden office furniture and accessories, plan filing cabinets and tables, canteen furniture, etc.

ADANA (PRINTING MACHINES), LTD., 15-18, Church St., Twickenham, Middx. Popesgrove 3655. Stand F.21.
Small printing machines including hand, treadle and power operated models.

ADREMA, LTD., 27, Telford Way, E. Acton W.3. Shepherds Bush 2091. Stands F.62/72.
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P.A.Y.E. machines.

AUTOFEEDS LONDON, LTD., 367a, King's Rd., S.W.10. Sloane 7732. Stand G.40.
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Airflex-Sunuminium flexible aluminium venetian blinds.

BANCROFT FOLDING MACHINES, LTD., Kinghamway, Reginald St., Luton, Beds. Luton 3081. Stand G.29.
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BAR-LOCK TYPEWRITER CO., Bar-Lock Wks., Basford, Nottingham. Nottingham 75141. Stand F.65.
Bar-Lock typewriters, stencil-card and continuous stationery attachments.

BRITISH TABULATING MACHINE CO., LTD., 17, Park Lane, W.1. Regent 8155. Stands F.40/46.
Complete range of punched card accounting equipment.

BRITISH TYPEWRITERS, LTD., Queen St., W. Bromwich, Staffs. W. Bromwich 0781. Stand F.38.
The Empire Aristocrat portable typewriter and accessories.

F. C. BROWN, Queens Rd., Bisley, Surrey. Brookwood 3131 Stand F.27.
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BULMER'S (CALCULATORS), LTD., 7-8, Poultry, E.C.2. Central 3611. Stand F.52.
Visible record systems, the Addo adding-listing machine, hand-operated rotary stencil duplicators.

BURROUGHS ADDING MACHINE, LTD., 356/366, Oxford St., W.1. Regent 7061. Stands F.61/73.
Accounting, adding, calculating and statistical machines and micro-film equipment.

BUSINESS PUBLICATIONS, LTD., 180, Fleet St., E.C.4. Chancery 8844. Stand F.59.
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JOHN DICKINSON & CO., LTD., 30-38, New Bridge St., E.C.4. City 5775 Stands M.29/38.
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THE DICTAPHONE CO., LTD., 107, Kingsway, W.C.2. Holborn 4161. Stand F.32.
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FRANK R. FORD, LTD., Sydenham Rd., Sparkbrook, Birmingham, 11. Victoria 1924. Stand F.25.
Spirit process duplicators including the Multilinex dual purpose machine for factory planning forms, etc.

GESTETNER, LTD., Aldwych Hse., W.C.2. Holborn 8700. Stands F.7/11.
Hand and electric rotary duplicators, Gesteprint office process, Scope drawing and tracing unit, photographic stencil-making outfit.

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Wooden office furniture.

J. GLOVER & SONS, LTD., Groton Rd., Earlsfield, S.W.18. Battersea 6511. Stand F.44.
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GUY'S CALCULATING MACHINES, LTD., Truro Rd., Wood Green, N.22. Bowes Park 3806 Stand F.19.
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HADLEY SOUND EQUIPMENTS, LTD., 72, Cape Hill, Smethwick, Staffs Smethwick 0977 Stand F.64.
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HALLAM, SLEIGH & CHESTON, LTD., Bagot St., Birmingham, 4. Aston Cross 0914. Stand C.115 (Castle Bromwich).
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JAMES HOWDEN & CO., LTD. 173, MacLellan St., Glasgow, S.1. Ibrox 2265. Stand F.51.
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J. J. HUBER, LTD., 22, Philpot Lane, Fenchurch St., E.C.3 Mansion House 5748. Stand F.31.
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IMPERIAL TYPEWRITER CO., LTD., East Park Rd., Leicester. Leicester 27801. Stands F.60/74.
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Loose-leaf books and systems, Vetro Mobil suspension filing system, machine posting trays and visible record equipment, ledger posting, P.A.Y.E., wages and salaries systems, etc.

BIF HIGHLIGHTS 1952

OFFICE INDEX—continued

SAMUEL JONES & CO., LTD., New Bridge St., E.C.4. Central 6500. Stand M.49.
Gumstrip sealing tapes, Camberwell Beauty sealing machines. The Lightning labeller, self-adhesive tapes and Samson adhesives; commercial and educational stationery, etc.

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Rotaprint offset-litho printing machines.

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Card index cabinets, lightweight metal box files, lever arch files, etc. Pak-Print marking process for drums, containers, etc.

KOLOK MFG. CO., LTD., Rochester Wks., Tariff Rd., N.17. Tottenham 3315. Stand M.30.
Carbon papers, inked ribbons, stamp pads and stamp pad inkers.

LEABANK CHAIRS, LTD., Clifton Hse., 91, Euston Rd., N.W.1. Euston 1474. Stand F.2.
Workchairs for office and factory, including upholstered and wooden models and stools.

LETTER-FILING APPLIANCES CO., LTD., Pioneer Wks., 47, Bath Row, Birmingham, 15. Midland 1063. Stand F.24.
Pioneer series of letter files, filing equipment, binders, etc.

LOTZ, ABBOTT & CO., LTD., Avenue Chambers, 4, Vernon Place, Southampton Row, W.C.1. Holborn 0672. Stand M.78.
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MAGNETA TIME CO., LTD., Goblin Wks., Leatherhead, Surrey. Ashtead 866. Stand F.20.
Synchronized clock systems, time recorders, programme instruments, iob costers, inter-office speaker-phones.

MANIFOLDIA, LTD., Artillery Hse., Artillery Row, S.W.1. Abbey 3240. Stand F.22.
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MARKMASTER, LTD., 18-20, York Bldgs., Adelphi, W.C.2. Trafalgar 2461. Stand F.26.
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E. N. MASON & SONS, LTD., Arclight Wks., Colchester, Essex. Colchester 2266. Stands F.69/70.
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NORWOOD STEEL EQUIPMENT (LONDON), LTD., 44, Norwood High St., S.E.27. Gipsy Hill 1104. Stand F.17.
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OLIVER TYPEWRITER MFG. CO., LTD., Victory Wks., 80, Gloucester Rd., Croydon, Surrey. Thornton Heath 4291. Stand F.47.
Oliver standard and portable typewriters.

POWERS-SAMAS ACCOUNTING MACHINES (SALES), LTD., Powers-Samas Hse., Holborn Bars, E.C.1. Holborn 8711. Stands F.6/12.
Complete range of punched card accounting equipment.

REES, PITCHFORD & CO., LTD., 72-74, Victoria St., S.W.1. Victoria 7723. Stand M.64.
Velos stapling machines and staples, pencil sharpeners, perforators, numberers, daters and other stationery sundries. The Snipe stapler.

REMINGTON RAND LTD., Commonwealth Hse., 1-19, New Oxford St., W.C.1. Chancery 8888. Stands F.33/34.
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RONEO, LTD., 17, Southampton Row, W.C.1. Holborn 7622. Stands F.3/16.
Stencil duplicators, electronic stencil equipment, visible record systems and equipment, control charts, posting trays and trolleys, suspended filing systems, flexible metal desking, hand and electrically operated postal franking machines, cheque signing machines, national insurance franking machines, photographic presentation cabinets and cases, and steel partitioning.

THE SHANNON, LTD., Shannon Corner, New Malden, Surrey. Malden 3262. Stand F.35.
Suspended filing systems, visible record binders, Visicopier copying panel, visible record and index systems, "made-to-measure" desks, personal filing cases.

SHUNIC, LTD., 114, Junction Rd., N.19. Archway 4181. Stand F.56.
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TOLLIT & HARVEY, LTD., 44, Southwark Bridge Rd., S.E.1. Waterloo 6841. Stand M.56.
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FRANK WILSON & CO., 16, Pilkington Rd., Southport, Lancs. Southport 2133. Stand F.37.
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WIREK (ELECTRONICS), LTD., Sonorous Wks., Deansbrook Rd., Edgware, Middx. Edgware 7631. Stand F.30.
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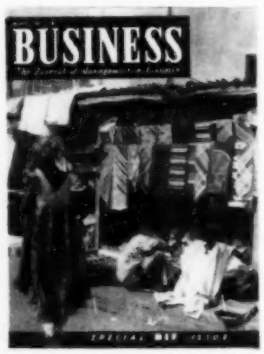

In keeping with the rest of this issue our cover is devoted to selling overseas. The colour photograph, taken by M. G. Walker, shows textiles on sale in the native market in Bamako, French West Africa.

IN ADDITION to current and past issues of BUSINESS, visitors to the stand of Business Publications, Ltd. (F.59) at Olympia will also have the opportunity of inspecting other periodicals, business books and directories published by the Group. Included in this range are "Advertiser's Weekly", "Advertiser's Annual" "Marketing Survey of the United Kingdom", "Paper Maker's Directory", etc. "System" desk diaries and secretaries and other efficiency devices will also be displayed on—

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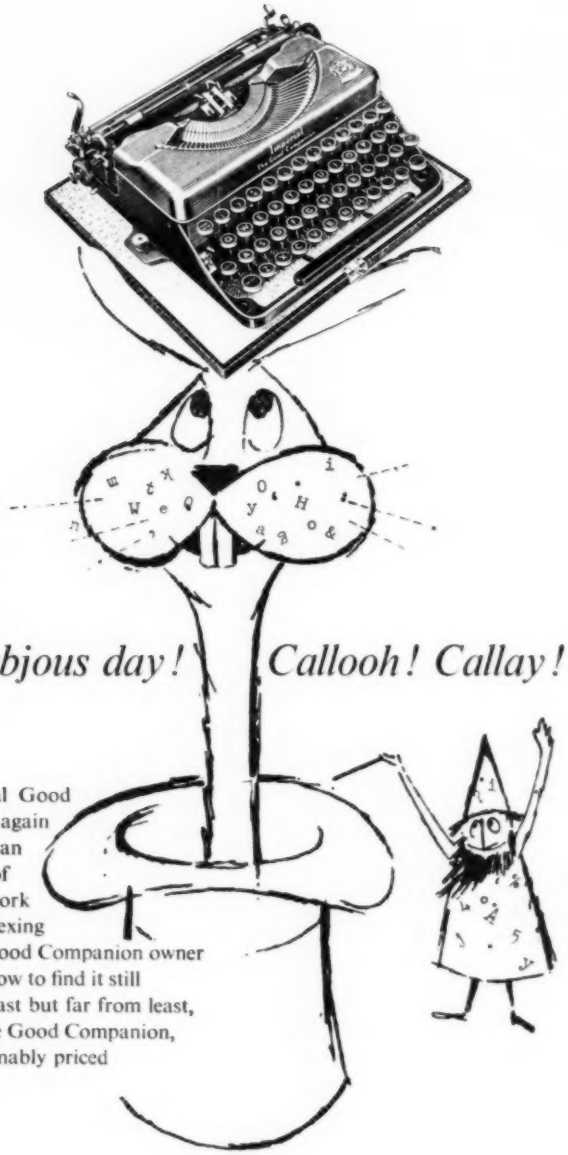

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BIF HIGHLIGHTS 1952

Index of Trade Names

Office Appliances & Allied Equipment

A

ABBESS—wooden office furniture. Abbott Bros. (Southall). (F67 and 71).

ADDO—adding/listing machines. Bulmer's (Calculators), Ltd. (F52).

AERO—transfer case. Henry Elwin, Ltd. (M6).

ALPHA—foil printing machines. Markmaster, Ltd. (F22).

ANSON—P.A.Y.E. Machine. George Anson & Co., Ltd. (F18).

ARCLIGHT—office, and drawing office furniture and equipment. E. N. Mason & Sons, Ltd. (F69 and 70).

ARISTOCRAT—portable typewriter. British Typewriters, Ltd. (F38).

ASTRAL—hand stapling pliers. Rexel, Ltd. (M28).

ATLANTA—transfer case. Henry Elwin, Ltd. (M6).

ATLANTIC—filing cabinet. Henry Elwin, Ltd. (M6).

A.T.M.—intercommunication telephones and sound amplification and distribution equipment. Communication Systems, Ltd. (F43).

AUTOFEEDS—automtic paper feeding machines. Autofeeds London, Ltd. (G40).

AUTOREX—filing equipment. Frank Wilson & Co. (F37).

A-to-Z—spirit process addressing machine. Exactus, Ltd. (F54).

B

BANKDEX—visible index equipment. Bulmer's (Calculators), Ltd. (F52).

BECKENHAM—ledgers. Percy Jones (Twinlock), Ltd. (F13 and 14).

BI—wire recorder. Wirek (Electronics), Ltd. (F30).

BINDA—transfer case. Henry Elwin, Ltd. (M6).

BISLEY—steel office equipment. F. C. Brown. (F27).

BLACK PRINCE—binders. Percy Jones (Twinlock), Ltd. (F13 and 14).

BRADMA—addressing machines, attachments and ancillary equipment. Adrema, Ltd. (F62 and 72).

BRITTANIC—hand operated calculating machines and key-operated cash registers. Guy's Calculating Machines, Ltd. (F19).

B SERIES—safes. Milners Safe Co., Ltd. (F50).

BURROUGHS—adding, calculating, book-keeping and statistical machines. Burroughs Adding Machine, Ltd. (F61 and 73).

BUTTERFLY BRAND—stationery supplies and sundries. Samuel Jones & Co., Ltd. (M49).

BYRON—office typewriter. Bar-Lock Typewriter Co. (F65).

C

CAMBERWELL BEAUTY—sealing machines. Samuel Jones & Co., Ltd. (M49).

CAMLOCK—binders. Percy Jones (Twinlock), Ltd. (F13 and 14).

CAPACITY—ledgers. Percy Jones (Twinlock), Ltd. (F13 and 14).

CARDINEER—rotary filing equipment. E. N. Mason & Sons, Ltd. (F69 and 70).

CELLMOUR—sheet plastic accessories. Shunic, Ltd. (F56).

CENTRE STITCHER—in-the-fold stapler. Rexel, Ltd. (M28).

CENTURY—account books, continuous stationery, loose-leaf ledgers, etc. John Dickinson & Co., Ltd. (M29 and 38).

CHALLENGE—account books, loose-leaf ledgers, etc. John Dickinson & Co., Ltd. (M29 and 38).

CHUBB—burglar and fire resisting safes and office equipment. Chubb & Son's, Lock & Safe Co., Ltd. (F58).

CITY—punches. Percy Jones (Twinlock), Ltd. (F13 and 14).

WHERE TO FIND THE STANDS

The letters prefixing the stand numbers denote the following sections :

F Office Equipment (Olympia)
M Stationery Supplies (Olympia)
G Printing Machinery (Olympia)

COLLEGE—notebooks. Percy Jones (Twinlock), Ltd. (F13 and 14).

COLUMBIA—inked ribbons and carbon papers. Columbia Ribbon & Carbon Manufacturing Co., Ltd. (F42).

COMET—stapler. Rexel, Ltd. (M28).

CORONET—binders. Percy Jones (Twinlock), Ltd. (F13 and 14).

CRACKER-JACK—expanding file. Henry Elwin, Ltd. (M6).

CROWN—binders. Percy Jones (Twinlock), Ltd. (F13 and 14).

CRUISER—transfer case. Henry Elwin, Ltd. (M6).

D

DOUBLE TOP—suspended filing system. Frank Wilson & Co. (F37).

DRAWLOCK—binders. Percy Jones (Twinlock), Ltd. (F13 and 14).

DU-AL—tubular steel furniture for factory, office and canteen. Dare-Inglis Products, Ltd. (F57).

DU-MODEL—high speed coding and counting machine. Universal Postal Frankers, Ltd. (F9)

DUO-TUFF—document wallets. Henry Elwin, Ltd. (M6).

E

ECONOMIC—loose-leaf ledgers. Moore's Modern Methods, Ltd. (F55).

ELECTRONIC STENCIL—Roneo, Ltd. (F3 and 16).

11 EN—adding machine. National Cash Register (Mfg.) Co., Ltd. (F8).

EMB—addressing plate embossing machine. Adrema, Ltd. (F62 and 72).

EMIDICTA—dictating machine. EMI Sales and Service, Ltd. (F48 and 49).

EMPIRE—Aristocrat portable typewriter. British Typewriters, Ltd. (F38).

EMPIRE—binders. Percy Jones (Twinlock), Ltd. (F13 and 14).

ENM—numbering and counting devices. English Numbering Machines, Ltd. (F4).

ES.1—hand-operated letter sealing machine. International Coin Counting Machine Co., Ltd. (F45).

ES.3—electrically-operated letter sealing machine. International Coin Counting Machine Co., Ltd. (F45).

EUCLID—filing equipment. Frank Wilson & Co. (F37).

EXACTUS—build-up letter trays. Exactus, Ltd. (F54).

EXACTUS—pocket stapler. Exactus, Ltd. (F54).

EXECUTIVE—letter tray stand. Henry Elwin, Ltd. (M6).

EXPANDA—filing equipment. Frank Wilson & Co. (F37).

EXPANDEX—visible filing equipment. Expandex Visible Filing Co., Ltd. (F63).

EXPRESS—box files. Henry Elwin, Ltd. (M6).

E.6A—letter opening machine. International Coin Counting Machine Co., Ltd. (F45).

E.9—electric letter opening machine. International Coin Counting Machine Co., Ltd. (F45).

F

F.1—folding machine. Bancroft Folding Machines, Ltd. (G29).

F.3(L)—steel filing cabinet. James Howden & Co., Ltd. (F51).

Continued overleaf

BIF HIGHLIGHTS 1952

INDEX OF TRADE NAMES

F.4—Coin counting machine. International Coin Counting Machine Co., Ltd. (F45).

413 INTERPRETER—punched card interpreter. British Tabulating Machine Co., Ltd. (F40 and 46).

500—foolscap and wide policy duplicators. Roneo, Ltd. (F3 and 16).

504 MULTIPLIER—punched card multiplier. British Tabulating Machine Co., Ltd. (F40 and 45).

5219—safe cabinet. Remington Rand, Ltd. (F33 and 34).

FIXUROWN—index tabs. Percy Jones (Twinlock), Ltd. (F13 and 14).

FLASH—box files. Henry Elwin, Ltd. (M6).

FLEET-RAIL—machine accounting equipment. Moore's Modern Methods, Ltd. (F55).

FLYWEIGHT—machine posting trays and trolleys. Roneo, Ltd. (F3 and 16).

FONADEK—telephone amplifier. Fonadek (Branson), Ltd. (F63).

FORDIGRAPH—spirit process duplicating machines. Frank R. Ford, Ltd. (F25).

FRANKOPOST—postal franking machines. Universal Postal Frankers, Ltd. (F9).

G

G.1—folding machine. Bancroft Folding Machines, Ltd. (G29).

G.B. BELL AND HOWELL—microfilm equipment. Burroughs Adding Machine, Ltd. (F61 and 73).

GESTEPRINT—office illustration duplication process. Gestetner, Ltd. (F7 and 11).

GIANT—heavy duty stapler. Rexel, Ltd. (M28).

GOLD SCRIPT—typewriter ribbons and carbon papers. Rexel, Ltd. (M28).

GOOD COMPANION—portable typewriter. Imperial Typewriter Co., Ltd. (F60 and 74).

GRAPHDEX—visual charting system. Remington Rand, Ltd. (F33 and 34).

GRIPSTYLE—files. Henry Elwin, Ltd. (M6).

GUARDIAN—binders. Percy Jones (Twinlock), Ltd. (F13 and 14).

GUILDHALL—account books, etc. Tollit & Harvey, Ltd. (M56).

H

H—folding machine. Bancroft Folding Machines, Ltd. (G29).

H3—folding machine Bancroft Folding Machines, Ltd. (G29).

HAMMER TACKER—staple tacking machine. Rexel, Ltd. (M28).

HANDIREF—binders. Percy Jones (Twinlock), Ltd. (F13 and 14).

HARCO—steel office equipment. G. A. Harvey (London), Ltd. (F29).

HARVEY—steel office equipment. G. A. Harvey (London), Ltd. (F29).

HATTON—binders. Percy Jones (Twinlock), Ltd. (F13 and 14).

HECTO-STAINLESS—hectographic carbons. Rexel, Ltd. (M28).

HERCULES—binders. Percy Jones (Twinlock), Ltd. (F13 and 14).

HERCULES—heavy duty stapler. Lotz, Abbott & Co., Ltd. (M28).

HOLBORN—ledgers. Percy Jones (Twinlock), Ltd. (F13 and 14).

HOLLERITH—electrical punched card accounting equipment. British Tabulating Machine Co., Ltd. (F40 and 46).

HOWDEN—steel office furniture and equipment. James Howden & Co., Ltd. (F51).

HUBEX—aluminium litho plates. J.J. Huber, Ltd. (F31).

I

I.C.C.—coin counting and sorting machines. International Coin Counting Machine Co., Ltd. (F45).

I.C.C.-RAPID—letter opening and envelope sealing machines. International Coin Counting Machine Co., Ltd. (F45).

INSERTA—mailing machine. Unifold Mailing Machines, Ltd. (F41).

INTERCOMMUNICATOR—intercommunication system. Hadley Sound Equipments, Ltd. (F64).

J

JETBIND—filing equipment. Frank Wilson & Co. (F37).

JIFFY—boxfiles. Henry Elwin, Ltd. (M6).

JUNIOR—office folding machine. Bancroft Folding Machines, Ltd. (G29).

JUNIOR—stapler. Rexel, Ltd. (M28).

JUSTSO—salaries, wages and time books. Tollit & Harvey, Ltd. (M56).

K

KARDEX—Visible record system. Remington Rand, Ltd. (F33 and 34).

KENT—ledgers. Percy Jones (Twinlock) Ltd. (F13 and 14).

KEYSTOR—card punch. British Tabulating Machine Co., Ltd. (F40 and 46).

KINGSBURY—suspended lever-arch files, boxfiles, index cabinets, etc. Kingsbury Components, Ltd. (F66).

KINGSWAY—loose-leaf ledgers. Moore's Modern Methods, Ltd. (F55).

KMC—standard typewriter. Remington Rand Ltd. (F33 and 34).

KOLOK—ribbons, carbons, stamp pads and inks. Kolok Manufacturing Co., Ltd. (M30).

KUTUROWN—index tabbing. Percy Jones (Twinlock), Ltd. (F13 and 14).

L

L.2—steel cupboard. James Howden & Co., Ltd. (F51).

LEABANK—executive office and industrial seating. Leabank Chairs, Ltd. (F2).

LINEDEX—strip index. Remington Rand, Ltd. (F33 and 34).

LIGHTNING—automatic sealing machine. Samuel Jones & Co., Ltd. (M49).

LINKDEX—indexing systems. Roneo, Ltd. (F3 and 16).

M

MAGIQUE—carbon paper. Rexel, Ltd. (M.28)

MAGNEGRAPH—tape recorder. Wirek (Electronics), Ltd. (F30).

MAGNETA—synchronous clock systems, time recorders, production control instruments, intercommunication equipment and public address systems. British Vacuum Cleaner Co., Ltd. (F20).

MAIL-TROLLEY—sack handling truck. Universal Postal Frankers, Ltd.. (F9).

MANIBAR—continuous stationery attachment. Manifoldia, Ltd. (F22).

MANICOPY—book-keeping system. Manifoldia, Ltd. (F22).

MANIFOLD—continuous stationery attachment. Bar-Lock Typewriter Co. (F65).

MANISPOT—carbon duplicating process. Manifoldia, Ltd. (F22).

MARATHON—foil printing machine. Markmaster, Ltd. (F26).

McGILL'S—stapling machines. Lotz, Abbott & Co., Ltd. (M78).

METALIQUE—carbon paper. Rexel, Ltd. (M28).

MILSPAN—suspended filing system. Milners Safe Co., Ltd. (F50).

MINI-ADD—desk and pocket adding devices. Exactus, Ltd. (F54).

MODERN—binders. Percy Jones (Twinlock), Ltd. (F13 and 14).

MODERN MASTER—loudspeaking master stations. Modern Telephones (Gt. Britain), Ltd. (F36).

MODERN MINOR—intercommunication equipment for small offices. Modern Telephones (Gt. Britain), Ltd. (F36).

MOORE'S MINOR—visible record books. Moore's Modern Methods, Ltd. (F55).

MOORESAFE—machine accounting equipment. Moore's Modern Methods, Ltd. (F55).

MOORESLIP—binding cases. Moore's Modern Methods, Ltd. (F55).

MOORESPEED—binders. Moore's Modern Methods, Ltd. (F55).

MOORE-VISIBLE—machine accountinge quipment. Moore's Modern Methods, Ltd. (F55).

MULTICOM—intercommunication system. Hadley Sound Equipments, Ltd. (F64).

MULTILINEX—dual purpose system duplicator. Frank R. Ford, Ltd. (F25).

MULTI-RING—binders. Percy Jones (Twinlock), Ltd. (F13 and 14).

MULTI-VALUE—postal franking machines. Universal Postal Frankers, Ltd. (F9).

N

NATIONAL CLASS 100—cash registers. National Cash Register (Mfg.) Co., Ltd. (F8).

NATIONAL CREDIT SANCTION SYSTEM—National Cash Register (Mfg.) Co., Ltd. (F8).

NEB—power-operated addressing machine. Adrema, Ltd. (F62 and 72).

NEOPOST—postal, national insurance franking machines and cheque signing machines. Roneo-Neopost, Ltd. (F3 and 16).

NEW MERSEY—filing cabinets. Milners Safe Co., Ltd. (F50).

NIMBLEX—visible record books. Moore's Modern Methods, Ltd. (F55).

NISSA—collapsible transfer case. Henry Elwin Ltd. (M6).

N.M.1.—steel executive desk. James Howden & Co., Ltd. (F51).

N.M.2—steel executive desk. James Howden & Co., Ltd. (F51).

N.M.3—single pedestal steel executive desk. James Howden & Co., Ltd. (F51).

N.M.4—single pedestal steel executive desk. James Howden & Co., Ltd. (F51).

N.M.5—steel office table. James Howden & Co., Ltd. (F51).

N.M.6—steel office table. James Howden & Co. Ltd. (F51).

O

O.A.6—steel cupboard. James Howden & Co., Ltd. (F51).

OFFICE QUALITY—safes. Chubb & Sons Lock and Safe Co., Ltd. (F58).

OLIVER—portable and standard typewriters. Oliver Typewriter Manufacturing Co., Ltd. (F47).

120—hand-operated duplicator. Gestetner, Ltd. (F7 and 11).

150—portable duplicator. Roneo, Ltd. (F3 and 16).

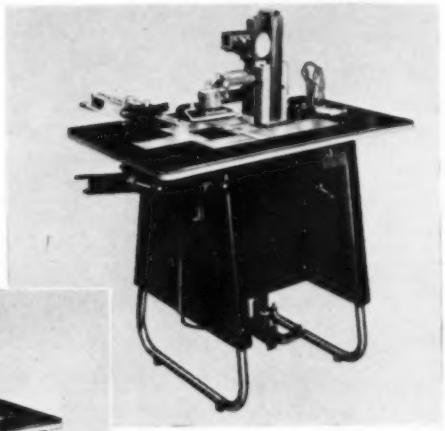
160—foolscap model duplicator. Gestetner, Ltd. (F7 and 11).

180—electrically-operated duplicator. Gestetner, Ltd. (F7 and 11).

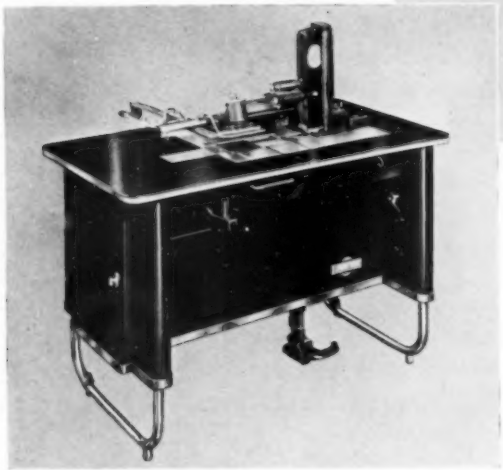
Continued on page 74

SEE Bradma IN ACTION !

B·I·F
OLYMPIA
STAND F62/72



PEB Power Operated Printing Machine



NEB Power Operated Printing Machine

A visit to our Stand or to our Showrooms, will provide you with full information on equipment which, wherever it has been installed, has brought planned simplicity and substantial economies in a wide range of office applications and Factory Production control.

Bradma

BRITISH ADDRESSING MACHINES AND BUSINESS SYSTEMS

ADREMA LTD., TELFORD WAY, LONDON, W.3 - SHEpherds Bush 2091

BIF HIGHLIGHTS 1952
INDEX OF TRADE NAMES

OVALPOST—binders. Percy Jones (Twinlock), Ltd. (F13 and 14).

P

PEB/S—automatic selector addressing machine. Adrema, Ltd. (F62 and 72).
PERFECTION—stapling machine. Lotz, Abbott & Co., Ltd. (M78).
PERSONAL—battery operated portable tape recorder. Wirek (Electronics), Ltd. (F30).
PLAN-O-MATIC—mechanical planning device. Dacron, Ltd. (F1).
PLASTIQUE—plastic-backed carbon paper. Rexel, Ltd. (M28).
POCKETREF—binders. Percy Jones (Twinlock), Ltd. (F13 and 14).
PONTHIER—continuous card-feed addressing machine attachment. Adrema, Ltd. (F62 and 72).
POSTE HASTE—ledgers. Percy Jones (Twinlock), Ltd. (F13 and 14).
POWERS-ONE—punched card accounting machines. Powers-Samas Accounting Machines (Sales), Ltd. (F6 and 12).
POWERS-FORTY—punched card accounting machines. Powers-Samas Accounting Machines (Sales), Ltd. (F6 and 12).
POWERS-SAMAS punched card accounting equipment. Powers-Samas Accounting Machines (Sales), Ltd. (F6 and 12).
POWERS-THREE—punched card accounting machines. Powers-Samas Accounting Machines (Sales), Ltd. (F6 and 12).
P.R.20—radio amplifier. Hadley Sound Equipments, Ltd. (F64).
PREMIER—binders. Percy Jones (Twinlock), Ltd. (F13 and 14).
PRESTO—posting trays. Percy Jones (Twinlock), Ltd. (F13 and 14).
PRINCESS—spirit process duplicator. Frank R. Ford, Ltd. (F25).
PROGRAMME BOARD VERIFIER—punched card equipment. British Tabulating Machine Co., Ltd. (F40 and 46).
PURITAS—hand-plier stapler. Lotz, Abbott & Co., Ltd. (M78).

R

R.30—offset-litho duplicator. Kaye's Rotaprint Agency, Ltd. (F5).
R.40—offset-litho duplicator. Kaye's Rotaprint Agency, Ltd. (F5).
R.70—offset-litho duplicator. Kaye's Rotaprint Agency, Ltd (F5).
RAPIDREF—binders. Percy Jones (Twinlock), Ltd. (F13 and 14).
RAILEX—suspended filing system. Frank Wilson & Co. (F37).
RAINBOW—stapling machine. Rexel, Ltd. (M28).
READY MASTER—hectographic duplication system. Columbia Ribbon & Carbon Manufacturing Co., Ltd. (F42).
RECORD—binders. Percy Jones (Twinlock), Ltd. (F13 and 14).
RED-BACK—box files. Henry Elwin, Ltd. (M6).
REDIREF—binders. Percy Jones (Twinlock), Ltd. (F13 and 14).
REJAFIX—marking and printing machines. Rejafix, Ltd. (F39).
RELIANCE—binders. Percy Jones (Twinlock), Ltd. (F13 and 14).
REMFLEX—photo-copying machine. Remington Rand, Ltd. (F33 and 34).
REPORTER—spring-driven portable tape recorder. Wirek (Electronics), Ltd. (F30).
RITEWAYT—letter trays. Henry Elwin, Ltd. (M6).
ROBUST—stapling machine. Rexel, Ltd. (M28).
RONEODEX—visible record and photographic presentation equipment. Roneo, Ltd. (F3 and 16).
ROTAPRINT—offset litho printing and duplicating machines. Kaye's Rotaprint Agency, Ltd. (F5).
ROTARY 50—hand operated duplicator. Bulmer's (Calculators), Ltd. (F52).

S

SAMCO—fire resisting safes. Samuel Withers & Co., Ltd. (F68).
SAMSON—stapler. Rexel, Ltd. (M28).
SCHED-U-GRAPH—visual control system. Remington Rand, Ltd. (F33 and 34).
SCOPE—stencil cutting device. Gestetner, Ltd. (F7 and 11).
SECURE—binders. Percy Jones (Twinlock), Ltd. (F13 and 14).
SECURITY—loose-leaf ledger. Moore's Modern Methods, Ltd. (F55).
SENTINEL—ledgers. Percy Jones (Twinlock), Ltd. (F13 and 14).
SHANNOBLIC—suspended filing system. The Shannon, Ltd. (F35).
SHANNOGRAPH—suspended filing system. The Shannon, Ltd. (F35).
SHANNOLEAF—visible records. The Shannon, Ltd. (F35).
SHANNOSTRIP—index system. The Shannon, Ltd. (F35).
SHANNOVUE—visible records. The Shannon, Ltd. (F35).
SHUNIC—metal signals, guide tabs and components. Shunic, Ltd. (F56).
SIMPLEX—desk diary. Business Publications, Ltd. (F59).
SIMPLEX—postal franking machines. Universal Postal Frankers, Ltd. (F9).
65—standard typewriter. Imperial Typewriter Co., Ltd. (F60 and 74).
SNIPE—stapling machine. Rees Pitchford & Co., Ltd. (M64).
SOLUS—manilla filing pockets. Henry Elwin, Ltd. (M6).
SOUNDMASTER—intercommunication equipment. Communication Systems, Ltd. (F43).
SOVEREIGN—ledgers. Percy Jones (Twinlock), Ltd. (F13 and 14).
SPB—single print plate embossing machine. Adrema, Ltd. (F62 and 72).
SPEEDAC—suspended filing equipment. Remington Rand, Ltd. (F33 and 34).
SPEEDFIX—self-adhesive tape. Rexel, Ltd. (M28).
SPEEDIFILE—pocket folders. Henry Elwin, Ltd. (M6).
SPIN-IT—rotary card file. Exactus, Ltd. (F54)
ST. BRIDE—loose leaf ledger. Moore's Modern Methods, Ltd. (F55).
STAPCO—spool wire stapling machine. Lotz, Abbott & Co., Ltd. (M78).
STERLING—loose-leaf binders and sheets. Tollit & Harvey, Ltd. (M56).
STORMOR—mobile storage equipment. J. Glover & Sons, Ltd. (F44).
STROWGER—private automatic telephone exchanges. Communication Systems, Ltd. (F43).
SUPER-FLEET—machine accounting equipment. Moore's Modern Methods, Ltd. (F55).
SWIFTA—box files. Henry Elwin, Ltd. (M6).
SYSTEM—desk secretary and diaries. Business Publications, Ltd. (F59).

T

T.4(L)—steel filing cabinet. James Howden & Co., Ltd. (F51).
TAPE-TO-CARD TRANSLATOR—punched card equipment for interpreting teleprinter information. Powers-Samas Accounting Machines (Sales), Ltd. (F6 and 12).
TELESOUND—intercommunication equipment. Modern Telephones (Gt. Britain), Ltd. (F36).
THREE-IN-ONE—ledger posting system. Percy Jones (Twinlock), Ltd. (F13 and 14).
THREE-IN-ONE—wages system. Percy Jones (Twinlock), Ltd. (F13 and 14).
TIME-MASTER—dictating and transcribing machines. Dictaphone Co., Ltd. (F32).
TIP-TOP—transfer case. Henry Elwin, Ltd. (M6).
TOTAX—wages and P.A.Y.E. system. Moore's Modern Methods, Ltd. (F55).
TRANSFER INTERPRETER—punched card equipment. British Tabulating Machine Co., Ltd. (F40 and 46).
TRENT—vertical filing cabinets. Henry Elwin, Ltd. (M6).
TRIGGER TACKER—stapler for labelling packing cases, etc. Rexel, Ltd. (M28).
TWINCLIP—fasteners. Percy Jones (Twinlock), Ltd. (F13 and 14).
TWINCOTE—carbon paper. Kolok Manufacturing Co., Ltd. (M30).
TWINLOCK—ledgers. Percy Jones (Twinlock), Ltd. (F13 and 14).
TWINRING—binding rings. Percy Jones (Twinlock), Ltd. (F13 and 14).
TWINSCREW—binding screws. Percy Jones (Twinlock), Ltd. (F13 and 14).

U

UNIFOLD—folding machines. Unifold Mailing Machines, Ltd. (F41).
UNIVERSAL—letter tray. Henry Elwin, Ltd. (M6).
U-SERIES—flexible desking. Roneo, Ltd. (F3 and 16).

V

VELOS—staplers, staples, pencil sharpeners, perforators, numberers, daters and stationery sundries. Rees Pitchford & Co., Ltd. (M64).
VETRO-MOBIL—suspended filing system. Percy Jones (Twinlock), Ltd. (F13 and 14).
VISIBLE 80—visible filing equipment. Roneo, Ltd. (F3 and 16).
VISICOPIER—visible record and copying system. The Shannon, Ltd. (F35).
VISI-CONTROL—planning and charting device. Visi-Control Systems, Ltd. (F10).
VISTADEX—visible index equipment. Bulmer's (Calculators), Ltd. (F52).
VULCAN—ledgers. Percy Jones (Twinlock), Ltd. (F13 and 14).

W

WEEK-TO-VIEW—desk diary. Business Publications, Ltd. (F59).
WHB—hand operated addressing machine. Adrema, Ltd. (F62 and 72).
WIDNEY-DORLEC—made-to-measure cabinets. Hallam, Sleigh & Cheston, Ltd. (C115 Castle Bromwich).
WINEL—office filing equipment. Henry Elwin, Ltd. (M6).
WIN-L-OAK—card index cabinets. Henry Elwin, Ltd. (M6).
WORKCHAIRS—industrial and office seating. Leabank Chairs, Ltd. (F2).

Z

ZAR—binders. Percy Jones (Twinlock), Ltd. (F13 and 14).
ZIPPER—ring books. Percy Jones (Twinlock), Ltd. (F13 and 14).

Your product may be —

Small

or large

or light

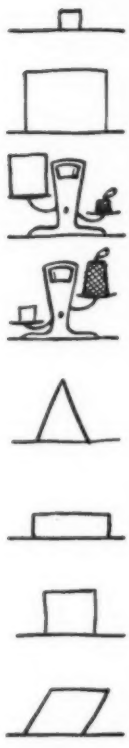
or heavy

triangular

rectangular

square

or rhomboid



- NONCURLING GUMMED PAPERS for labelling every kind of product.
- "GUMSTRIP" Regd. SEALING TAPES & "GUMSTRIP" Regd. SEALING MACHINES for sealing all parcels, packets and cartons.
- "SAMSON" Regd. ADHESIVES for every trade.
- SELF-ADHESIVE SEALING TAPES for—security—protection and airtight sealing.
- PRESSURE SENSITIVE LABELS, for branding, coding, pricing, etc.
- COUNTER ROLL HOLDER for packing various sized parcels, available in seven widths.
- WATERPROOF MATERIAL for home and export packing.
- THE LIGHTNING LABELLER Regd. moistens gummed labels in a second. Made in 3in., 5in., and 9in. widths.

— but you can be sure it is safely packed if you use BUTTERFLY BRAND PRODUCTS Regd.

BUTTERFLY BRAND

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BISLEY
TRADE MARK
STEEL
EQUIPMENT
STAND No.
F27
OLYMPIA
AT THE
BRITISH INDUSTRIES FAIR
F. C. BROWN. BISLEY, SURREY

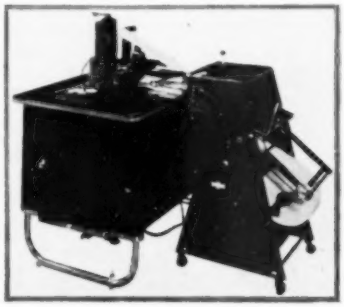
BIF HIGHLIGHTS 1952

Of Interest to You

Equipment for the Office

Versatile Addresser

OUTSTANDING among the larger addressing machines on the Adrema, Ltd., stand will be the *NEB*. This is a power-



This roll-feed and guillotine unit takes 14 in. reels of paper.

operated heavy-duty machine, streamlined in appearance and performance. It is readily adaptable to multi-column listing, continuous form feed or automatic single-sheet feed, whilst the extra-wide printing arm makes it possible to print outsize forms without folding.

In addition to normal addressing, the machine may be applied to such operations as billing, insurance, salaries, wages and factory form methods. The machine may also be linked with punched card equipment.

A graphic demonstration of the capabilities of the automatic selector will be given. The machine has been set up to play a version of the popular "Twenty Questions" game.

Also of interest will be the *Bradmaster* letter-writing unit, which can be fitted to a printing machine, in conjunction with an automatic suction feed, when it will produce a letter with name, address, personal salutation, facsimile signature, and date—all in one operation.

The latest attachments which have been developed for various machines for continuous card feeding and guillotining will also be available for inspection.—(*Adrema, Ltd. Stands F.62 and 72, Olympia.*)

Hand to Automatic

INTENDED for use with any model addressing machine, a roll feed and guillotine consists of two units: a self-contained driving unit mounted on wheels and a reel stand. Both units are fixed to the addressing machine by clamps, and an electric switch is mounted so that it is operated each time the parent machine prints. The attachment selects or skips automatically when the addressing machines does, and it can be arranged to give more than one print on each form if desired, with the guillotine cutting after only every second or third print.

The throw can be controlled mechanically, or marks or holes can be sensed on preprinted forms. The standard model takes a maximum width of 9ins. and gives a maximum throw of 10ins.; the throw is variable. The unit can be arranged to draw the paper or card from front to back, left to right, or *vice versa*.

Automatic suction feeds for use with electrically-operated addressing machines will also be on show.—(*Autofeeds London, Ltd. Stand G.40, Olympia.*)

Folds Accurately

A NEW-TYPE fold plate, fitted to the larger models of the *Bancroft* folding machine, has been designed to reduce paper drag and thus give more accurate folding than before.

The four larger machines in the range are primarily intended for use in printing works and in offices where a large quantity of printed matter is despatched daily. The *Junior* model, on the other hand, is a portable machine that will find a place in many smaller offices. It is electrically operated, will fold to five different styles, and has simple dial adjustments that enable the fold positions to be adjusted instantly.

Paper up to 15ins. by 10ins. can be handled by the *Junior*, and the maximum folding speeds are 7,500 an hour with 15ins. long sheets and 12,500 per hour with sheets 10ins. long.—(*Bancroft Folding Machines, Ltd., Stand G.29, Olympia.*)

Unit Construction

THE B.I.F. sees the debut of a new typewriter in the *Byron*. This machine has been built on the unit principle to simplify servicing and replacements. The type bar, keyboard, ribbon mechanism, paper carriage and base are all constructed as self-contained units, which can be simply removed when necessary.

The machine has an almost totally-enclosed mechanism, and a

The Autofeed attachment in use.

new ribbon cover excludes dirt—at the same time retaining visibility of the writing line. The tabulator is one of the most interesting features of the *Byron*. It is set and cleared from the keyboard by plastic keys, and single stop or total clearance is available.

Another new design point is the paper feed, which has been completely redesigned to ensure perfect registration. Interchangeable hard or medium platens are used for different types of work, and the light alloy carriages can be rapidly interchanged to take different widths of paper. Visual indication of ribbon colour or stencil positions is given by a window on the front of the machine.

The 90-character keyboard has shallow keys with chromium-

The new Bar-Lock Byron.

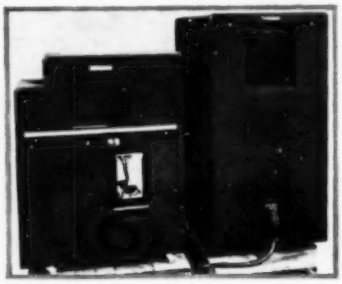
plated rings. A green "new wrinkle" finish is standard on the machine.—(*Bar-Lock Typewriter Co. Stand F.65, Olympia.*)

Multiplies in Sterling

CENTRE of the British Tabulating Machine Co., Ltd., stand will be occupied by the first direct sterling *Electronic Multiplier*, actuated through punched cards.

The machine consists of two units, and carries out all its operations directly in sterling, as opposed to other methods where various conversions have to be used. The machine's speed is 6,000 cards per hour, and the time taken for the actual multiplication is less than 70 milliseconds.

Another interesting demonstration will concern the *Mark Sensing* machine. Information is punched into cards by this machine in accordance with pencil strokes made on it. One application is in production control on the floor of a factory. Employees using piece-work cards mark information on



Multiplies direct in sterling

them by putting a pencil stroke in certain columns. The *Mark Sensing* reproducer translates these pencil marks into punched holes, and the punched cards then form the basis for all payroll computations. — (*British Tabulating Machine Co., Ltd. Stands F.40 and 46. Olympia.*)

Small But Good

CLAIMED to be the most portable typewriter in the world, the *Empire Aristocrat* will form the centre of the display on the stand of British Typewriters, Ltd. The machine is no higher than a match box, and yet embodies a standard four-bank keyboard and many of the features of an office machine. Automatic ribbon reverse, clear visibility of the writing line, a back spacer, margin release and platen ratchet release are among these features. The writing line is 9¼ins. long. An all-steel carrying case with automatic locks is provided as standard, but an entirely new range of travelling cases of various qualities will also be displayed.—(*British Typewriters. Ltd. Stand F.38. Olympia.*)

Shelves Adjustable

NEW feature of the steel cupboards being shown by F. C. Brown is the adjustable shelving. This gives the equipment greater flexibility to meet the needs of different offices, stores and works.

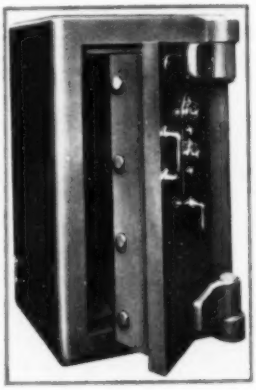
Among other products on the stand of this manufacturer will be *Bisley* index cabinets, which are "linked," various types of steel lockers and cabinets, and a rubber-cornered waste paper bin, which prevents damage to clothing or furniture.—(*F. C. Brown. Stand F.27, Olympia.*)

For Security

A BANKER'S "third strength" safe will be the highlight of the display of one of the oldest lock and safe manufacturers in the country.

This safe is the most powerful self-contained standard equipment of its type and weighs 4½ tons. It is resistant to both blowpipes and explosives, and will also fully protect documents, etc., from fire. The locking mechanism is secured either by two key locks and a key combination lock, or by two key-less combination locks.

An additional safety feature is the emergency relocking device, which comes into operation automatically if a main lock is dislodged by explosives, or if the door



This safe has "third-strength".

is attacked by other means. Various arrangements of internal shelves, drawers and cupboards can be supplied.—(*Chubb and Son's Lock and Safe Co., Ltd. Stand F.58, Olympia.*)

Loud and Clear

"LOUD-TO-LOUD" conversation between two or more master stations without the use of a speak/listen key is one of the features of the *Soundmaster* press-

Typescript, Photographs, Drawings or Forms

B.I.F. Olympia—May 5-16. (Office Appliance Section) STAND No. F5.

The small British-built Rotaprint litho machine takes no more room than the average duplicator and is just as simple to operate, yet it is possible to change over in a few minutes from the printing of a long typewritten report to an illustrated pamphlet or an even more elaborate job in colour, on all kinds of paper. It really would pay you at least to find out a little more about the advantages of handling your own print. But the essence of the matter is to get into good hands from the beginning.

IT IS ALL THE SAME TO THIS MODERN OFFICE MACHINE

Whilst the average office is normally provided with some means of duplicating, much of the equipment is restricted to the reproduction of simple typewritten matter on duplicating papers. Indeed, to the average business man, office printing means little more than running-off a few circulars on "cheap" looking paper. Anything more ambitious such as photographically illustrated brochures or colour work is frequently dismissed as being impracticable or too complicated. Yet the Rotaprint, a very simple process is available to the commercial business house and is so versatile that almost any print job in the office comes within its scope. Typescript, photographs, drawings, or ruled forms are all the same to this modern office machine. The great thing about Rotaprint is the sense of having all your routine printing under your own control. All jobs are on easily filed, thin flexible plates ready to run off copies at a moments notice, whether the quantity be 50, 500 or 5,000. The convenience alone is outstanding.

KAYE'S Rotaprint

HONEYPOT LANE, LONDON, N.W.9.

For the fullest technical advice free from extravagant claims, the full name—KAYE'S Rotaprint, Ltd., is important, for it is a guarantee that you are dealing with a genuine all-British organisation of 25 years standing, having the technical qualification, and manufacturing resources necessary to provide consistent long term service.

VOUCHER

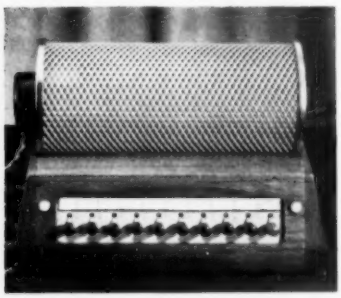
For the fullest information about Rotaprint, merely pin this voucher to your letterheading and post to Kaye's Rotaprint, Ltd., Honeypot Lane, London, N.W.9.

Please send without obligation full particulars of the all-British Rotaprint with a free portfolio of specimen work to the address given on the attached business letterheading.

B.5

button intercommunication system. In addition, full intercommunication is available between all the sub-instruments; master station calls (indicated by a lamp signal) take precedence over all others.

The master station comprises two units—a microphone and a loudspeaker—and these may be located anywhere to suit the user's convenience. The microphone housing is so shaped as to permit sound from any direction to be transmitted at a uniform level. The base of the instrument also incorporates the line keys, illuminated indicators and on/off switch. The executive using the instrument can walk freely about his



This instrument picks up speech from any direction.

office whilst talking, without raising his voice or operating any keys.

Intercommunication telephones and *A.T.M.* radio-speech and record amplification equipment will be other exhibits. —(*Communication Systems, Ltd. Stand F.43, Olympia.*)

Comfortable Stacker

IDEAL for assembly halls, meeting rooms, etc., is a new stacking armchair with tip-up seat, which will be introduced on the stand of Dare-Inglis Products, Ltd. The chair has a high curved back, a three inches deep sponge rubber upholstered seat, and sponge rubber arm-rests. The chairs can be locked together to form rows of any number; they are easy and light to handle and can be screwed to the floor if required. This new model has a novel upholstered finish—a combination of *Bedford Cord* material and *Vynide*. Those parts of the chair which are most subject to hard wear are reinforced with the *Vynide* material.

The *ASD167* executive chair will also be shown for the first time. The base of this is of a new design to ensure maximum rigidity and stability. The height of the seat is adjustable to all normal heights, and the arm-rests and seat are fitted with deep sponge rubber cushions. Spring-loaded tilting action is incorporated in this new model. — (*Dare-Inglis Products, Ltd. Stand F.57, Olympia.*)

Saves Writing

MULTIPLE hand posting for a wide variety of applications in book-keeping and account work can be carried out with the *Definac* accounting system. Sales and bought ledgers, statements and remittance advices, receipts, traders' credits, sales and purchase analyses, P.A.Y.E., stores control and cost accounts are some of the operations that can be simplified and made more accurate by this method.

The system is designed to be used in conjunction with the *Definac* visible record device. One advantage of this method is that any existing cards may be used.

A new range of trays in light alloy designed to house a large number of cards or sheets in a small space will also be displayed. —(*Definac, Ltd. Stand F.18, Olympia.*)

Uses Plastic Belt

THE *Time-Master* dictating machine, which uses plastic memo-belts as its recording medium, will form the display of the Dictaphone Co., Ltd. The memo-belts provide for 15 minutes' dictation and can be transcribed, filed, stored or mailed in an ordinary business envelope.

Either a desk or a hand microphone may be used with the dictating unit. One important point in the *Dictaphone's* favour is its small and compact dimensions. It is only 4½ins. high and quite portable.

For the secretary there is an independent transcribing machine. This unit has simple controls, and the operator can repeat as much or as little as she likes, and a positive correction system makes it simple for her to correct mistakes and to determine the length of letters. Volume, tone and speed of playback are easily controlled, and

The Time-Master dictation machine.

back-spacing is instant and automatic.—(*The Dictaphone Co., Ltd. Stand F.32, Olympia.*)

Self-Adjusting File

TWO of the products from the range manufactured by Henry Elwin, Ltd., to be featured on their stand at the B.I.F. are the *Winel* series of card index cabinets and the twin-spring file.

The index cabinets are made of veneer and solid oak. One- or two-drawer units are available to take cards 5 by 3, 6 by 4, and 8 by 5ins. in size. The twin-spring file makes insertion and removal of papers easy, and it automatically adjusts itself to hold large or small numbers of papers. Quarto or foolscap sizes are available in various colours.

Many other types of office filing equipment, including card index outfits, manilla folders and pockets, document wallets, ring and lever binders, stationery racks, etc., will also be on show.—(*Henry Elwin, Ltd. Stand M.6, Olympia.*)

Improved Dictation

THE new model of the *Emidicta* dictating machine incorporates a number of refinements, including an indicator lamp system, a convenient hand microphone rest, and an alternative method of indexing. There are three coloured indicator lamps—green, red and blue—and these work in conjunction with the dictate/listen switch, and show at a glance whether the machine is

I'M MIGHTY PROUD . . .

Proud to handle a machine that does all the important jobs—built for that kind of service by the inventors of the stencil duplicating process.

Perfect copies, a smooth, *silent* performance, complete reliability . . . handling a Gestetner means all of those things—and I'm mighty proud of mine!

SEE THE GESTETNER STAND NO. F7/11 B.I.F. OLYMPIA

Gestetner THE WORLD'S LEADING DUPLICATOR SPECIALISTS
ALDWYCH HOUSE, LONDON & BRANCHES EVERYWHERE

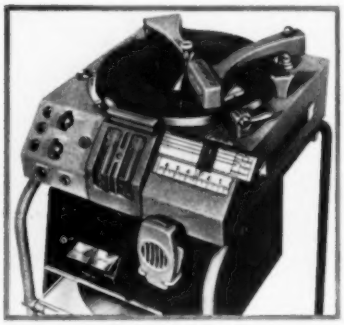
set for dictation, transcription or telephone recording. The hand microphone rest can be fixed in any position on the machine where it is most convenient for the user.

Plastic indexes are used as the alternative method of cueing; these replace the slips used on previous models.

The *Emidicta* uses magnetic oxide-coated discs made of paper as its recording medium. The quality of reproduction of the discs is not affected no matter how many times recordings are made and erased. The discs—which can accommodate six minutes of dictation—are simple to change and can, if required, be sent through the post.

A new range of accessories will also be shown at the B.I.F. for the first time; these include the telephone coupling unit, which enables one or more dictating machines to be connected to a telephone system or a commercial communications receiver. Two-way conversations or instructions, messages, etc., can be recorded in this way.

A featherweight stethoscope headset for transcription has a



The new accessories can be seen on this Emidicta.

weight of only ¾oz. The detachable ear pieces can be washed to keep them clean and hygienic. —(*E.M.I. Sales and Service, Ltd. Stands F.48 and 49, Olympia.*)

Spinning File

NEAT rotary card index unit which will be displayed by Exactus, Ltd., is known as the *Spin-It*. The unit will accommodate 500 cards, 3¼ins. by 1¾ins., complete with index. The wheel is revolved by means of a hand grip, and, when not in use, the cards can be protected from damage and dirt by means of a sliding metal cover.

The *Spin-It* has a wrinkle enamel finish, and measures 3¾ins. by 6ins. by 5¼ins. high.

Another interesting addition to the Exactus range of office equipment is a letter tray made in various fine woods that is designed to be built up into units as required. —(*Exactus, Ltd. Stand F.54, Olympia.*)

Flat and Visible

EXCLUSIVE feature of the *Expandex* visible filing system is the expanding and contracting end holders to the bridge members. These ensure free movement as the bridge member extends to any angle.

Standard sizes are jumbo, foolscap, continental and quarto, and internal folders of all types, with signalling devices, can be supplied. The concertina arrangement can be built up alphabetically, numerically, geographically or by subject. —(*Expandex Visible Filing Co., Ltd. Stand F.63, Olympia.*)

Hands Free

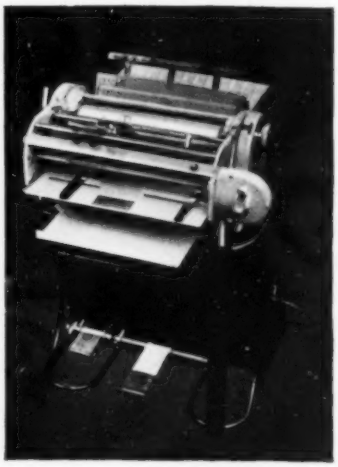
AN instrument that relieves the telephone user of the necessity for holding the receiver to the ear is the *Fonadek* telephone amplifier. The telephone receiver is placed on the instrument, and incoming and outgoing speech are both amplified. The instrument frees the hands for writing, referring to documents, etc.

Operation can be either from a battery or the mains, and the *Fonadek* can be used with G.P.O. and most other telephones. An internal loudspeaker model is available for the factory or noisy office.—(*Fonadek (Branson), Ltd. Stand F.63, Olympia.*)

Dual Purpose Printer

CLAIMED to be the only machine of its kind produced in the British Commonwealth capable of two distinct operations is the *Multilinex*.

It is especially designed for the reproduction of factory forms for planning and production control. Its dual function is to reproduce the whole of the information from a single master or original or to



The Multilinex spirit duplicator for factory forms.

extract from the same master any specific information for individual tickets, etc.

Other machines working on the spirit process principle designed for general duplicating work in the office will also be on display.—(*Frank R. Ford, Ltd. Stand F.25, Olympia.*)

Easier, Cleaner

SHOWN for the first time at the B.I.F. will be the 180—latest model in the *Gestetner* range of stencil duplicators. The 180 model incorporates a number of protective features which provide for easier, cleaner and better duplicating. It has a maximum printing area of 16⅜ x 13ins., and takes paper up to 17¼ x 14½ins. With equal facility it will feed single post cards measuring 5 x 3ins. The *Express* vacuum pump inking system used, which has hitherto only been available on the foolscap *Model* 160, ensures a perfectly even distribution of ink, irrespective of the size of copy.

Another model to be displayed is the *120*, which is hand operated and suitable for use in smaller offices where short runs are the rule.

The complete series of duplicating accessories will also be featured, including the *Scope*, which

LET'S BE PRACTICAL — No. 4

What is a Powers-Samas Tabulator?

THE Powers-Samas Tabulator is the machine which extracts the required information (whether alphabetical or numerical) from the punched cards; adds, subtracts, provides totals and balances and, in fact, produces the finished work—the completed accounting and costing records and statistical analyses indispensable to efficient modern management.

The Tabulator "reads" all the perforations in each punched card at a speed of 100 cards a minute and translates the punched information into words and figures, printing them (with all necessary totals and balances) on any required form of prepared stationery—roll paper, continuous forms, interfold paper, ledger sheets, carbon "sets" or what you will.

The Tabulator is, as it were, the last link in the chain of punched card operations which make up the smooth-flowing efficient and economical Powers-Samas system of mechanical accounting.

Further information gladly supplied by :—

POWERS-SAMAS

POWERS-SAMAS ACCOUNTING MACHINES (SALES) LIMITED

POWERS-SAMAS HOUSE · HOLBORN BARS · LONDON · E.C.1

Telephone No. HOLborn 8711

BIF HIGHLIGHTS 1952

EQUIPMENT FOR THE OFFICE

Latest Gestetner—the 180.

simplifies drawing, ruling and tracing on stencils.—(*Gestetner, Ltd. Stands F.7 and 11, Olympia.*)

Mobile Storage

SAVINGS of space of between 40 and 100 per cent. can be effected—the manufacturers claim—by the use of *Stormor* mobile storage equipment. The equipment consists of a number of storage racks which are free to move along rails on ball-bearing castors. This means that gangways are eliminated, as each unit can be rolled out of the way to give access to the one behind. Because they are so smooth running, it is simple to move several of the units at one time.—(*J. Glover and Sons, Ltd. Stand F.44, Olympia.*)

Robot Radio

COIN-OPERATED radio equipment will be shown by Hadley Sound Equipments at this year's B.I.F. Any number of listening units can be connected to the main control equipment. The manufacturers claim that even if the units are not used full-time, the installation is a paying proposition for hotels, etc. The whole equipment is simple to install, as the room units do not require any power connections.

Industrial radio and speech amplification equipment and the *Intercommunicator*, which combines a radio and an intercommunication system, will also be seen on the stand. — (*Hadley Sound Equipments, Ltd. Stand F.64, Olympia.*)

Prefabricated Cabinets

MOST office equipment users take the efficiency of steel cabinets for granted. What is sometimes overlooked is the fact that standard steel cabinets do not always exactly meet individual requirements. Yet to have "custom-built" cabinets would be costly. These difficulties are largely overcome in a new type of cabinet, construction of which is made up from prefabricated parts to suit individual needs. Most important are the corner units, which are die-cast. Fitting into these are specially-shaped sections forming a framework which can be screwed or riveted together. Plastic or metal panels complete the body of the cabinet.

Special brackets can be fitted into the base of the unit for slide rails or telescopic runners to make the contents easily accessible.

Known as the *Widney-Dorlec* range, the cabinets will be on show in the Electrical Section of the B.I.F. at Castle Bromwich. — (*Hallam, Sleigh and Cheston, Ltd. Stand C.115, Castle Bromwich.*)

Metal Range

A COMPLETE range of *Harco* steel office furniture and industrial equipment will be shown by the manufacturers, G. A. Harvey and Co. (London), Ltd.

Their products include double and single pedestal steel desks, tables, plan cabinets (which are fire, rot, damp and vermin-proof), card index cabinets, cupboards, lockers, waste paper tubs, letter trays, etc.

Of particular interest will be a range of adjustable storage bins and shelving of an entirely new design. — (*G. A. Harvey and Co. (London), Ltd. Stand F.29, Olympia.*)

Redesigned in Steel

A REDESIGNED range of steel desks can be inspected on the stand of James Howden and Co., Ltd. The range includes a double pedestal executive desk with automatic locking in each pedestal, and a single pedestal model which has two box and one deep drawer. Each of these desks measures 4ft. 9ins. by 2ft. 9ins.

A small steel typist's table with one non-locking drawer will be shown for the first time, and also

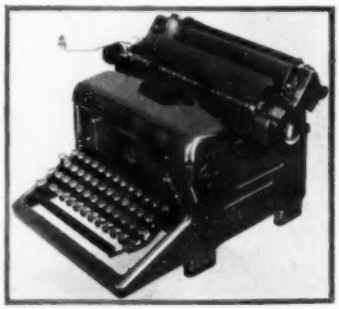
For modern executives.

a general-purpose office table measuring 4ft. by 2ft. 9ins. by 2ft. 6ins. high.

A particularly interesting item for American buyers will be a 28ins. filing cabinet, which was specially produced to meet their requirements. — (*James Howden and Co., Ltd. Stand F.51, Olympia.*)

Imperial Occasion

OLYMPIA will provide the setting for the premiere of a new Imperial typewriter, which has been named the *Model 65*. This machine incorporates many new mechanical features to save the typist's time and labour, whilst



The Imperial Model 65 has many new features.

retaining the exclusive features of previous *Imperial* models.

The keyboard is provided with many extra signs, including "plus," "equals" and additional fractions, and there are 92 charac-

WHAT happens when YOU SPEAK

DO YOU hum-and-har and stumble in search of words?

DO YOU gape and gulp and become tongue-tied with embarrassment?

DO YOU shout (or whisper) all the time without tonal variety or interest?

DO YOU lose your point and miss your climax?

DO YOU get worse and worse as you feel your listeners getting more and more bored?

DO YOU forget what you meant to say, as soon as you're on your feet?

or

DO YOU marshal your arguments logically and convincingly?

DO YOU impress your listeners by forceful, calm reasonableness, punctuated by the right emphasis at the right place?

DO YOU reply to critics or enquirers without losing your self-possession —*or* your temper?

DO YOU feel that your audience is *with* you?

DO YOU *want* to be able to wield those most powerful of all weapons—*words*—to your own personal advantage and to your own advancement in any sphere you may choose? If so, this offer is specially addressed to you.

THE SPEAKERS' CLUB
(Dept. B/ES61), MARPLE, CHESHIRE.

Speakers' Club (Dept. B/ES61)
Marple, Cheshire.

Please send me your book, "How to Work Wonders With Words" I enclose 2½d. stamp for postage.

Name.....
(Please use block letters).

Address .....

.....

SPEECH is the key to SUCCESS

WHATEVER your walk in life, the gift of speaking convincingly and forcefully will bring you immeasurable advantages socially, commercially, financially. The ability to express your thoughts and convictions with tact, vigour and persuasiveness, opens all doors, breaks down all barriers, and leads you inevitably to the big things of life.

FREE . . . This fascinating book, "How to Work Wonders With Words," explains a new amazingly easy method of acquiring the gift of speaking efficiently, developing poise and personality, banishing timidity and self-consciousness. One hundred thousand men and women in all walks of life—including business executives, salesmen, factory workers, clerks and those in the Services—have found in this remarkable book a key that has opened a veritable floodgate of natural speaking ability. Send for a copy of this unique book today. It will show you how to develop this power of speech—easy—quick—sure.

WHAT THIS BOOK WILL SHOW YOU

- How to address business meetings.
- How to speak before your lodge or club.
- How to train your memory.
- How to propose and respond to toasts.
- How to make an announcement.
- How to write better letters.
- How to enlarge your vocabulary.
- How to develop self-confidence.
- How to acquire a winning personality.

ters in all. An auxiliary paper-shelf makes sure that even the thinnest bond or airmail paper can be handled with ease and will not feed back into the platen.

Every standard machine has an in-built keyset tabulator; a ten-key decimal version can be fitted as an extra. The adjustable touch and *Quickset* margins are features inherited from previous models. With the *Model* 65 the type unit, carriage, and platen can also still be changed by the typist allowing a great variety of work to be produced on the one machine.

Five carriage widths, ranging from 12 to 26ins. are available.—(*Imperial Typewriter Co., Ltd. Stands F.60 and 74, Olympia.*)

Mail Handler

HAND and electrically-operated machines for opening and sealing envelopes at speeds that make them suitable for large or small offices will be on the stand of International Coin Counting Machine Co., Ltd. The machines will handle any size of envelope, and are sufficiently compact to fit conveniently on a desk or table. A deep bronze-green finish is standard, and fittings are chromium-plated.

The counting machines for silver or copper and mixed coin can handle up to 60,000 pieces an hour, and they will cut out at a pre-set amount. — (*International Coin Counting Machine Co., Ltd. Stand F.45, Olympia.*)

Self-Supporting Tray

FEATURED on the stand of Percy Jones (Twinlock), Ltd., will be their new machine posting tray. Accounting, ledger, stock control, personal wages and tax record cards used in conjunction with machine accounting systems can be accommodated by the tray. Four sizes are available to take cards 12, 14, 16 or 18ins. wide.

Despite their shallow construction, the trays do not become top-heavy, even when full of cards. Special supports come into operation when the trays are opened for posting and ensure the stability of the equipment.

The locking device for securing the cards when the tray is not in use has been combined with the lifting handles. These are hinged on the heavy steel back tilt plate. They clip back out of the operator's way when the tray is opened, and when closed they swing round and automatically snap into the locks on the front plate.

A label-holder is fitted, and the equipment is finished in hammered grey with plated fittings. Overall measurements are: height, 10½ins., depth (open) 14ins., (closed) 6½ins.—(*Percy Jones Twinlock), Ltd. Stands F.13 and 14, Olympia.*)

No Damping Rollers

SCUM, grey print and waste are eliminated by the *Rotafount* automatic damping device, which is now fitted to all models of the *Rotaprint* offset-litho printing machine. The machine uses an aluminium or paper master, which can be typed or drawn on direct, and which may be processed to allow reproduction of line or half-tone illustrations. Superimposed

DO YOU STILL STICK TO STAMPS?

It's safer, speedier and cheaper to use

neopost

Over 2 million National Insurance cards are franked every week with Neopost. Write for brochure "Control and Reconciliation of National Insurance Contributions."

National Insurance Machines

RONEO-NEOPOST LTD. · VICTORIA HOUSE · SOUTHAMPTON ROW · LONDON · W.C.1 Tel: HOLBORN 4933

7.59 a.m.!

It may be the last minute—but all employees get through on time, because they record so swiftly on the

INTERNATIONAL SUPERELECTRIC ATTENDANCE TIME RECORDER

A one handed operation—and they instantly check their time registration with the direct-read figures on the machine

Automatic operation by insertion of card—no levers to move.

In and out and day to day records automatically positioned.

For further information of this modern Attendance Time Recorder—now manufactured in this country—ask for free descriptive folder 509/2

IBM UNITED KINGDOM LTD.

formerly trading as

INTERNATIONAL TIME RECORDING CO., LTD.

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and at Birmingham, Manchester, Leeds and Glasgow.

HEAD OFFICES—INTERNATIONAL WORKS, BEAVOR LANE, HAMMERSMITH, LONDON, W.6

International Business Machines

Add *wings* to her hands . . .

Here is a stream-lined typewriter that will give your typist's fingers the fleetness of wings, enabling her to do more and better work with less effort . . . a quiet, easy running machine with a series of interchangeable carriages that will cope typing demands with all possible from the routine letter to the report calling for a 17-inch line.

Your nearest Bar-lock agent will promptly demonstrate the 'Byron.'

"BYRON"

with the NEW feather-touch

AND IT'S ALL BRITISH

B.2.

BAR-LOCK TYPEWRITER CO., NOTTINGHAM. PHONE 75141/2

multi-colour work can be carried out on the machines, which are all fully automatic in operation.—(*Kaye's Rotaprint Agency, Ltd. Stand F.5, Olympia.*)

Adjustable Comfort

SIMPLE adjustment of the back-rest is one of the features of *Leabank* workchairs. A single hand wheel gives both vertical and horizontal adjustment, and can be operated from the sitting position.

Many models are available for different requirements, and they can have either upholstered or wooden seats and back-rests.—(*Leabank Chairs, Ltd. Stand F.2, Olympia.*)

For Long Runs

NOW in full production is the *Marathon* multi-colour dry-foil printing machine. Continuous or very long run repetitive jobs are this machine's particular *forté* and a pneumatic circuit has been introduced that eliminates variations in output by reducing the physical effort required to operate the machine. The machine's output has been increased and it has many applications for such jobs as trade name marking and decoration on metal, wood, plastic, glass, cardboard, leather, pottery, etc.—(*Markmaster, Ltd. Stand F.26, Olympia.*)

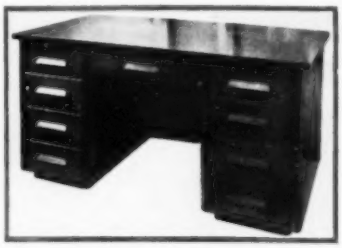
Revolving File

ROTARY filing systems make it easy to keep records in order, and they are more rapid in operation than other methods for all the cards are within arm's reach of the clerk.

One such equipment is the *Cardineer*, which is available in two different models to house cards from 4 by 5 to 8 by 10ins. in size. Any one card may be selected, extracted and written on with the minimum effort, and facts relating to stocks, orders, deliveries, etc., are immediately to hand. The equipment is enclosed in a streamlined metal cabinet.

Another item of interest on this stand will be an executive's pedestal desk, which is available in a range of woods. The desk is fitted with reference slides and automatic pedestal locking, and has smooth, rounded lines.

Equipment that solves the problem of storing large drawings,

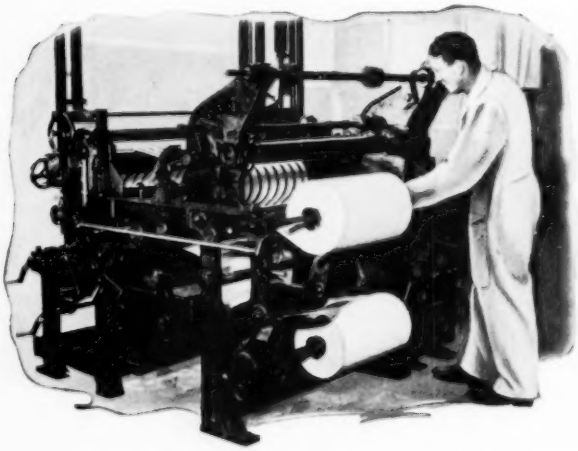


Handsome and solid in wood.

plans, litho-plates and similar materials will also be shown.—(*E. N. Mason and Sons, Ltd. Stands F.69 and 70, Olympia.*)

Combined Operations

IN a new filing cabinet to be shown by Milners Safe Co., Ltd., three of the four drawers are of the standard type; the fourth—



Carbon papers are coated in the roll, overall or in strips, on one or both sides, in up to three degrees of sensitivity, eight colours and ten weights, for all systems, machines . . .

KOLOK

KOLOK MANUFACTURING CO. LTD.
ROCHESTER WORKS, TARIFF ROAD, TOTTENHAM, LONDON, N.17.
TEL: TOTTENHAM 3315. CABLES: 'KOLOK', LONDON.

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113, HIGH HOLBORN, W.C.1.

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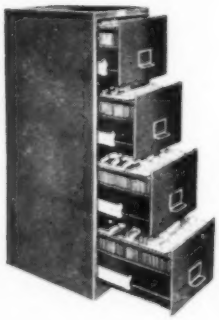
London's largest stockists for 50 years of new and second-hand office furniture and equipment in wood or steel.

Executive desks, size 5' x 3' in oak or mahogany



Filing cabinets with suspension filing systems.

Mechanical drawing board with parallel motion.

Revolving and tilting armchair upholstered in hide or moquette

Suppliers of complete office installations including lino, carpets, typewriters and all office machinery.

OUR REPUTATION ENSURES YOUR SATISFACTION

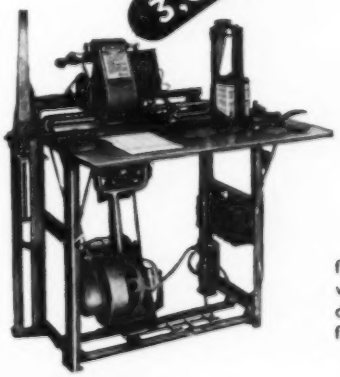
PROGRESS

? PER HOUR

How efficient is your mailing department? With the ADDRESSALL machine you are able to automatically address for dispatch up to 3,000 envelopes per hour—with absolute accuracy

To those concerns who have the problem of regular mailings the ADDRESSALL machine will show a definite saving of time and money.

3,000 PER HOUR!



Why not send for our brochure which gives fuller details and information.

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MACHINE COMPANY

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Telephone: HOLborn 3571-3572

the top drawer—contains a specially designed safe which can be used to hold valuable or confidential documents, cash, etc. The safe can be fitted with a combination lock.

Fire- and burglar-resisting safes, fire-resisting filing cabinets, strong room doors and similar equipment designed to protect valuable property, and a range of steel desks, which includes a new double pedestal model, will make up the remainder of the display on this stand.—(*Milners Safe Co., Ltd. Stand F.50, Olympia.*)

One or All

THE *Telesound* intercommunication system makes it possible for an executive to speak to everybody in a room through loudspeakers fixed at key points. Any person in the room can reply to him through the same loudspeakers. Master stations are provided which give the executive a number of direct lines to his staff, as well as enabling him to make announcements over the *Telesound* network of speakers. A *Minor* instrument is also available for use in smaller premises. It can give communication between from four to six points, and the individual units can stand on a desk or be fitted to the wall. — (*Modern Telephones (Great Britain), Ltd. Stand F.36, Olympia.*)

Simple Binder

NEW-STYLE binder for printed matter which will be on view for the first time at the B.I.F. is the *Mooreslip*, designed especially for wire-stitched periodicals, magazines, advertising brochures, sectional catalogues and the like. Thin, flexible metal straps fitted to the binder are slipped through the wire stitches of the literature to be bound. The ends of the straps are secured, but individual items can be added to, or withdrawn from, the binder with ease. — (*Moore's Modern Methods, Ltd. Stand F.55, Olympia.*)

For binding periodicals.

Simplified Adder

ONE of the principal products on the stand of the National Cash Register (Mfg.) Co., Ltd., will be the latest model in the range of *National* adding machines. The electrically-operated model 11-*EN* has a keyboard accumulating capacity up to one penny under £10,000,000, provides a printed record and prints direct credit and sub-credit balances in red. All totals, sub-totals, add, subtract and non-add bars are motorized and operated by the right hand.

Direct subtraction, printing in red and the automatic printing of totals greatly simplifies the operator's work, which is also made

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Emidicta

ELECTRONIC DICTATION SYSTEM

Whatever your line, if you have to employ a secretary and typists, you can save yourself much time and money. You can dispose of your correspondence in half the time and turn your office into a far more efficient unit. How? By installing the new correspondence system which so many firms, both large and small, are now using to their great advantage.

★ The EMIDICTA Dictation Machine is made by E.M.I. (*His Master's Voice, Marconiphone, Columbia, etc.*) **masters of the art of recording and sound reproduction.**

E.M.I. SALES & SERVICE LTD.

See the **EMIDICTA** at the **BRITISH INDUSTRIES FAIR** Stand F48/49 Olympia May 5-16

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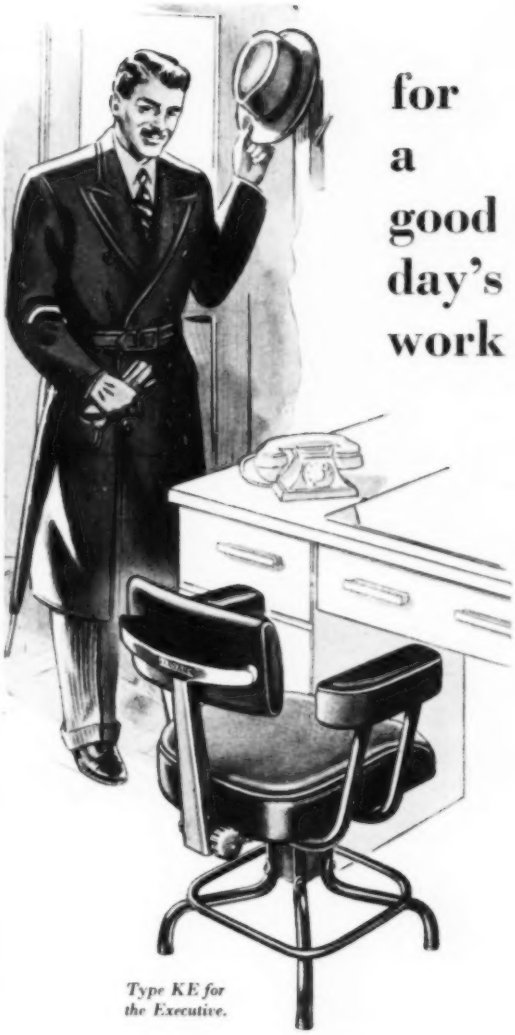
363/367 OXFORD STREET, LONDON, W.1
Telephone:
Mayfair 8597 · Grosvenor 7127/8

EM32AK



for a good day's work

Type KE for the Executive.

Here is the chair for a man in your position.

LEABANK WORKCHAIRS

Write for details of full range of office and factory chairs.

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easier by the large answer dials, fully visible keyboard with new light touch keys in stair-step arrangement, and four-way selective space control. Both hand and electrically-operated versions will be on show.—(*National Cash Register (Mfg.) Co., Ltd. Stand F.8, Olympia.*)

For Flexible Offices

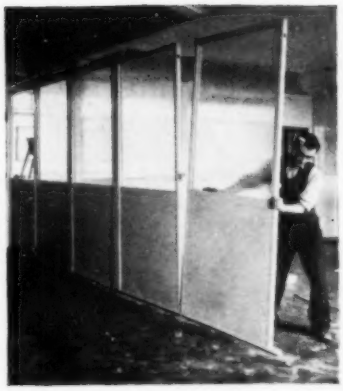
STEEL partitioning of a new type will be displayed on the stand of Norwood Steel Equipment (London), Ltd. This partitioning is of the single-skin type, but it uses the double-skin method of construction normally associated with office lay-outs. This means that it is cheaper to install, yet attractive in appearance. If necessary, the partitions can be dismantled and re-erected on another site in a different arrangement without any waste of material. Approximately half of the area of each standard wall unit is glazed with a single sheet of glass; this permits maximum light penetration.

The manufacturers will also be displaying a new four-drawer foolscap filing cabinet, as well as their standard range of office and industrial steel shelving, lockers, cupboards, bins, etc.—(*Norwood Steel Equipment (London), Ltd. Stand F.17, Olympia.*)

Long-Distance Accounting

DEVELOPMENT in punched card equipment which allows up-to-the-minute centralized recording of transactions at remote points has been named the *Tape-to-Card Translator*. This machine works in conjunction with a standard *Creed* teleprinter and combines the advantages of punched card accounting methods with those of the teleprinter.

The central accounting point and each "satellite" branch is equipped with a teleprinter machine, and, in addition, the central point has a *Tape-to-Card Translator*. At convenient intervals during the day the branches transmit details of the transactions which have taken place, using the teleprinter in the usual way. At the receiving centre the transmissions are reproduced in the form of perforated tape, as well as in the normal form of a typewritten message. The tape is then fed into the new machine, which automatically translates the perforations into punched cards at high speed.



Erecting the new partitioning.

Transactions taking place at remote points are thus recorded at

GOOD CRAFTSMANSHIP is its own advocate—and as proof, we still find ourselves with a waiting list of keen folk who are sure that an excellent thing is well worth waiting for. Their patience has been well tried, but we can only say that as their names are reached, they will have the best duplicators it is possible to obtain.

These machines are fully guaranteed for 10 years. The M100E shown here is power-operated, feeding faultlessly from more than a ream of duplicating paper. It has also a world-patented, fully automatic inking system which will give neat and beautifully fine copies from start to finish and its self-acting counter will immediately switch off from duplicating as soon as the pre-set number is reached. Speed and pressure are variable, reproducing all types of work—each copy exactly alike and equally excellent—of anything that can be written, drawn or typed and we shall be glad to give further details on request.

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WITH THE *Everest* CALCULATOR

MODEL Z4

- *Ten key setting*
- *Silent — Speedy*
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Right up to the minute in appearance and ease of operation. Simply touch a button and speak *instantly!* Each EDISWAN Loudspeakerphone is fully guaranteed. Please write for illustrated leaflet B.77

PRICE: Standard Master Unit for 6 extensions: **£22.10.0**
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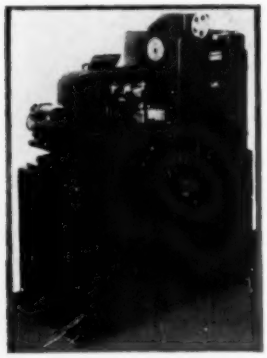
RP77

the accounting centre within minutes, and the punched cards



The Tape-to-Card-Translator is used with a teleprinter.

produced are immediately ready for use in the production of accounting records by means of standard sorting and tabulating machines. — (*Powers-Samas Accounting Machines (Sales), Ltd. Stands F.6 and 12, Olympia.*)

Trouble-Free Facsimiles

EXHIBITED for the first time in London at the B.I.F. is the new *Remflex* semi-dry facsimile photo-copying machine.

The unit has been specifically designed for office use, and the operator can work comfortably from a seat in front of it.

Direct copies of original documents, letters, reports, books, etc., can be inexpensively produced in mirror or facsimile form, according to the type of original. Any additional number of facsimile copies can be produced from a mirror copy whenever required.

One advantage of the equipment is that the paper used is less sensitive to light than ordinary photographic document paper, and it can be handled in normal lighting conditions.

The processing method is a "semi-dry" one, and no large trays of chemicals, washing apparatus or dryer are required.

The amount of chemical fluid needed to produce a copy is very small, and the chemical is dispensed only as required. The cost of producing each facsimile print is, therefore, reduced as there need be no wastage.

Shown on the same stand will be the *Remington KMC* typewriter,

The new keyboard of the KMC.

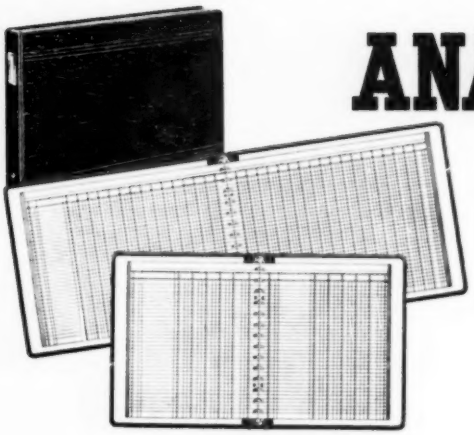
which has a new keyboard that incorporates keys for margin setting and for clearing jammed type bars. — (*Remington Rand, Ltd. Stands F.33 and 34, Olympia.*)

Shows Your Products

SOME products, because of their size, weight or for other reasons, cannot be carried around

A NEW Twinlock Production...

MULTIRING
ANALYSIS BOOKS



★ FOR EASY HANDLING
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★ SHEETS IN LOOSE REFILLS OR PADS

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Supplies obtainable only through the Stationery, Printing and Office Equipment Trades.

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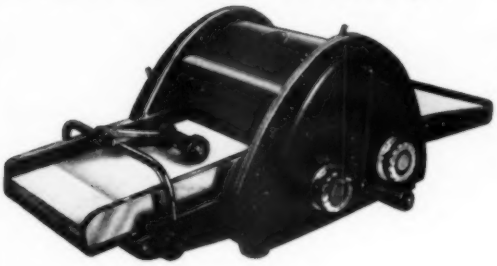
THE PELICAN

The Reproducer with Diffusion Damping



SIX MILLION DROPS!

Pelican diffusion damping employs six million microscopically small drops, which are applied with mathematical precision to the paper used. The volume of the drops can be varied according to the size of paper and the number of copies required—a factor which contributes to the high operating efficiency of the Pelican machine.

Moreover, Diffusion damping does not restrict the paper to be used to the hardsized or super-calendered type since all types and surfaces of paper can be used with equally satisfactory results.

THERE'S ALWAYS ROOM FOR A PELICAN!

- For smooth surfaced paper the supply of spirit is more restricted. A movement of the regulating knob and the correct supply of fluid is automatically adjusted.
- Diffusion damping ensures that too much dye is not taken from the original, thus reducing wear. Even with highly absorbent paper one original is sufficient for numerous copies.

  The automatic paper feed greatly assists the operator. Any size of paper from Foolscap to postcard size is firmly gripped and evenly fed.
- The automatic locking device safeguards the original whilst it is in the machine. By automatically operating when the supply of paper is interrupted, it prevents the pressure roller from damaging the original.
- When small forms or short texts are used the paper can be limited to the length of the text or form, thus conserving spirit.
- The spirit cannot flow after printing, as damping automatically ceases when the cylinder stops turning.

SOLE CONCESSIONAIRES FOR THE BRITISH ISLES AND THE BRITISH COMMONWEALTH

MAXLOVE "CONTINUOUS" LIMITED

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CHAIRS

Du-al office seating is scientifically designed to minimise fatigue of sedentary staff. Du-al Chairs will repay their cost over and over again in increased staff efficiency.

C.A.146. De-Luxe typists Swivel Posture Chair (embodying new floating nut assembly. *Pat. pending*). *Floating back support with spring adjustable tension and vertical adjustment.*

I.C. 121. Super De-Luxe Executive Armchair. Revolving with automatic sliding seat and pivoting backrest. Self-adjusting to correct height. Wide arm-rests with sponge interior

See our STAND No. F57 Olympia, May 5-16.

B. 51. Cantilever Chair. An all purpose office chair. Curve-shaped padded seat and back.

Write or 'phone today for illustrated catalogue.

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"DU-AL" HOUSE,

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for demonstrations to prospective customers, and as an alternative illustrations have to be used. But it is important that the illustrations are carried in a safe, easily accessible way, and arranged and presented as attractively as possible.

Designed to fulfil this function is a new photographic presentation case which will be appearing for the first time at the B.I.F. Pictures can either be permanently or temporarily mounted in the leather cases which hold up to 50 at a time. The cases are designed to be used in conjunction with a main library of pictures housed in steel cabinets with sliding trays; the mounted photographs are instantly interchangeable between case and cabinet.

Shows off your photographs.

Another product of this company is adaptable metal desking; this is built on the unit principle, and pedestals with a variety of drawers and compartments are available.

Several refinements have been incorporated in the range of *Neopost* franking machines. A wider range of postal rates is now fitted, and a dual safety device prevents the handle being operated unless an envelope is in the correct position.—*Roneo, Ltd. Stands F. 3 and 16. Olympia.)*

Saving Combinations

TWIN features on the stand of Shannon Systems, Ltd., will be the *Visicopier* copying panel for use with visible records and a range of "tailor-made" executive desks built up from standard units.

The new *Visicopier* panel combines the advantages of visible record ledgers with overlapping edge signals, and multiple copying. It consists of a two-leaf metal panel with a sliding hinge and a row of interlocking lugs. These lugs grip the prongs of the ledger, and day book, statement and ledger are all filled in with a single writing.

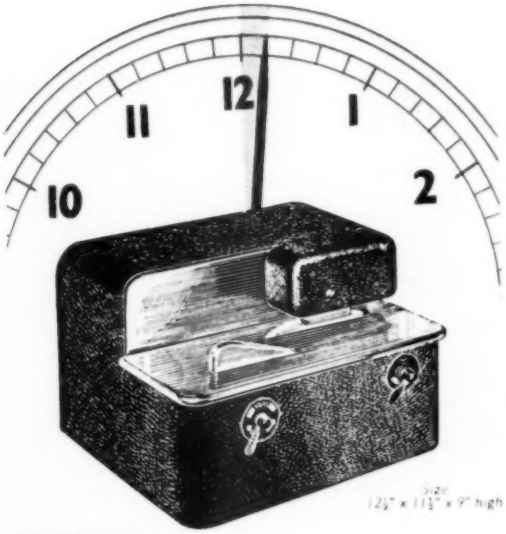
Many different arrangements of drawers and pedestals are available with the new "made-to-measure" desks. Flush or overhanging tops can be fitted, and the

Visible records and multiple copying are combined by the Visicopier.

To the tune of big business everywhere Remington is setting the pace. It swings efficiency into top gear . . . promotes increased production . . . and lives up to the big things expected of its super streamlined appearance. It's a winner all the way . . . backed by all the VERY latest aids to smoother, speedier typing that have made the name of Remington famous.

Write to-day for illustrated folder.

REMINGTON RAND LTD. (Dept. K.M.C. 14)
1 New Oxford St., London, W.C.1. CHAncery 8888



500 letters opened in 1 minute*

Your office day gets off to a smooth and efficient start with this excellent I.C.C. machine — designed to save your organisation time and money.

A junior can operate it.
It is *safe* and consistent.
No danger to envelope contents.
Automatic feed.
Power operated, with adjustment for large or small mail.
Self sharpening cutters.

* A hand operated model is available for firms receiving a small mail.

We shall be glad to demonstrate in your office the

ICC

LETTER OPENING MACHINE

International Coin Counting Machine Co. Ltd.
Alexandra Road, Enfield, Middlesex
Telephone: Howard 1886

Makers of letter-opening, envelope-sealing, coin-counting and token-counting machines.

B.I.F. OLYMPIA — STAND No. F45

EXECUTIVES!

Here is a NEW IDEA to control your daily activities.

Busy executives usually have many things to remember . . . . Appointments, things to be done, contracts to renew, staff matters . . . . a hundred and one things to tax the memory.

Here is a way to control *every* activity—at the appointed time—on the right day—in the right month . . .

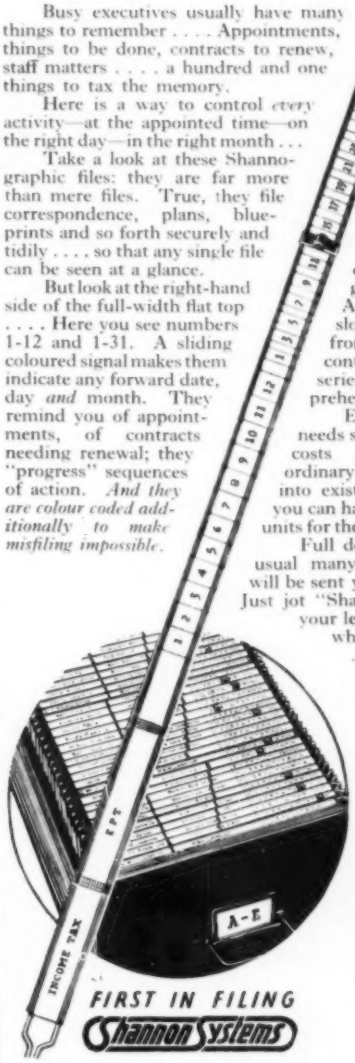
Take a look at these Shannographic files: they are far more than mere files. True, they file correspondence, plans, blueprints and so forth securely and tidily . . . . so that any single file can be seen at a glance.

But look at the right-hand side of the full-width flat top . . . . Here you see numbers 1-12 and 1-31. A sliding coloured signal makes them indicate any forward date, day *and* month. They remind you of appointments, of contracts needing renewal; they "progress" sequences of action. *And they are colour coded additionally to make misfiling impossible.*

Each file is suspended metal on metal. That means better visibility, quicker reference, greater neatness. And each has a slotted-in card in front for recording contents of the files, series of actions, comprehensive data.

Every executive needs such a system. It costs no more than ordinary files. It will go into existing cabinets—or you can have self-contained units for the top of your desk.

Full details of this unusual many-purpose system will be sent you at once . . . . Just jot "Shannographics" on your letterheading now, while you think of it . . . . *and lessen the strain on yourself and your memory.*



Here is just one application of Shannographic daily control of additionally it gives system. Next and is a neat Safe filing Executives. First, it Filing — for Top every activity. The ready printed numbers, 1-12 and 1 to 31, permit dating and progressing. A slotted-in record card gives a summary . . . But write in for fuller details of this unique system.

FIRST IN FILING
Shannon Systems

The Shannon Ltd.
93 Shannon Corner - New Malden - Surrey

units are constructed of Sapele mahogany.—(*The Shannon, Ltd. Stand F.35, Olympia.*)

Automatic Mailer

A MACHINE that folds, envelopes and seals material and publicity matter at rates up to 2,500 documents an hour is the *Inserta*. The machine will deal with documents ranging from 4ins. by 4ins. to 8½ins. by 13½ins., and envelopes up to 9ins. by 4ins.

The documents to be mailed are placed on the feed table and an equivalent number of envelopes laid in the hopper. Both the document and the envelope are automatically lifted and suction fed, and the document is folded, inserted in the envelope, and the flap is then turned and sealed in styles suitable for ordinary or business postal rates. A wide choice of folding styles is available.

Various other machines for folding only, and designed for hand or automatic feeding, will be shown. —(*Unifold Mailing Machines, Ltd. Stand F.41, Olympia.*)

Sack Manager

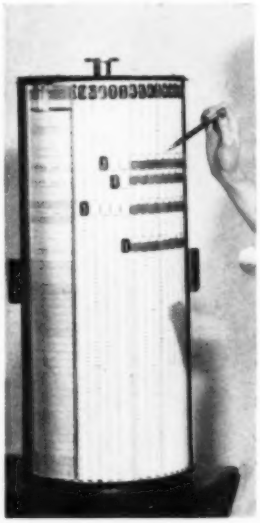
FULL mail sacks are usually quite heavy and unmanageable by some members of the staff. The *Mail Trolley* is a mobile device that enables the heaviest mail sack to be transported without difficulty from one place to another. Adjustments can be made to ensure that sacks are held open whilst the packages are being thrown in.

Another interesting product to be shown by the same exhibitor is the latest *Simplex* franking machine, which can print every denomination from a halfpenny to sixpence halfpenny with one impression.

The larger multi-value hand or electrically-operated machines can print every denomination up to 9s. 11½d. or 29s. 11½d., according to the model, and, besides handling ordinary letters, will also deal with airmail and parcel post. Changing rates of postage do not affect the usefulness of these machines, as the range of values is wide enough to accommodate any such variations. — (*Universal Postal Frankers, Ltd. Stand F9, Olympia*)

Visible Control

A COMPACT and effective method of charting, which enables planning to be carried out

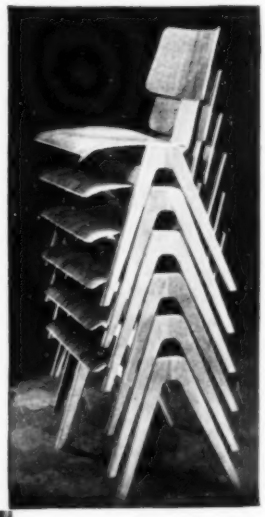


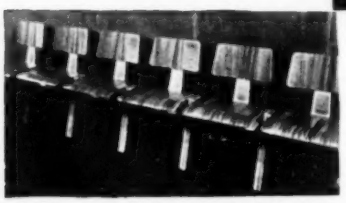
Hillestak *stacking chair*

This new stacking chair is eminently suitable for dining or occasional use. The strong construction, easy stacking and low cost make it ideal for massed seating in halls, restaurants, etc.

- *Shaped back and seat*
- *All wood construction*
- *Stacks vertically*
- *Suitable for row seating*
- *Free of purchase tax*

Retail price **60/-** trade discounts
Special discounts for large orders





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S. HILLE & COMPANY LTD., ROMFORD RD., CHIGWELL, ESSEX. TEL. HAInault 4151 four lines

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★ IN PRIVATE CONVERSATION
★ IN THE OFFICE
★ IN THE HOME

THE FONADEK SAVES

TIME
COST
REPETITION
IRRITATION

The FONADEK is the smallest, simplest most convenient Telephone Amplifier in the world.

SPEAK AND HEAR THROUGH THE

FONADEK

REG TRADE MARK

B.I.F. STAND F.63
OLYMPIA

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Regd. Trade Mark

BRINGS SUSPENSION TO ALL FILES KEPT ON SHELVES AND GIVES YOU SUSPENDED FILING IN HALF THE SPACE

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- **Avoids opening drawers.**
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- **Speeds up reference.**
- **Reduces the cost of filing equipment.**
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- **Strongly made and suspended to prevent wear.**

FILES ARE EASY TO PUT ON OR TAKE OFF THE RAIL WITH ONE HAND

Let us send you further particulars of this new system which has proved itself in use and is rapidly extending

FRANK WILSON & CO.,
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Tel: 2133.
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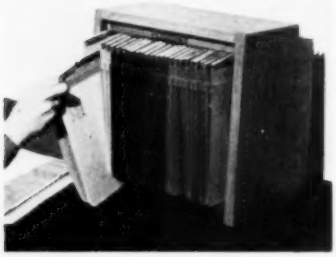
400 Suspended Files fit into this 5-Rail Cupboard

BIF HIGHLIGHTS 1952

EQUIPMENT FOR THE OFFICE

more speedily and simply, is marketed under the name of *Visi-Control*. The device consists of a perforated cylinder with guides and coloured signals to indicate various operations. The cylinder revolves to give a continuous charting service, and rotating cursors give finger-tip control of facts and figures. All the data recorded on the cylinder progresses simultaneously at predetermined intervals towards a chosen date line.



Keeps papers out of the way.

The system is very flexible and is simple to operate. The cylinder has a capacity of 5,000 data-holders, and it measures 30ins. high and 15ins. in diameter. Coloured signals to indicate progress, and additional cords in varying colours, to show target dates, can be incorporated on the cylinder.—(*Visi-Control Systems, Ltd. Stand F.10, Olympia.*)

Clears Your Desk

DESIGNED to keep the desk top free of papers and documents, yet make them instantly accessible, is a new device based on the *Railex* suspended filing system. Special folders have a metal bayonet-slot device which clips on a rail, giving suspension from a single point. The files and folders are available in a variety of sizes and styles. Identification tabs fixed at an angle on each folder make for rapid selection. The frame of the units is of polished wood.

Up to 400 files—twice as many as will fit in a four-drawer cabinet—can be stored in one of these five-rail cupboards. A pull-down slatted front protects the contents from dust. Special folders can be provided for storing drawings, blueprints, and litho-plates.—(*Frank Wilson and Co. Stand F.37, Olympia.*)

Dictate Anywhere

PORTABLE tape recorders the size and shape of a shoe box will be shown by Wirek (Electro-

Spring driven tape recorder.

STRONG RELIABLE EFFICIENT

The name MILNERS has become synonymous with SECURITY—MILNERS SAFES and STRONG-ROOMS have earned a world-wide reputation for soundness of construction and reliability.

That same craftsmanship is embodied in MILNERS STEEL EQUIPMENT. Sensibly designed for its purpose, good to look at, it promotes efficiency in your factories and amongst your staff.

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- ★ Keylock Release and Zeroising Levers have been incorporated into one, giving easier and more natural access.
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- ★ ***NEW*** enlarged Answer Figures in larger apertures.
- ★ ***NEW*** shape guarantees full visibility of every figure even at acute angles.
- ★ Is fully portable, will operate anywhere in any office.
- ★ ***NEW*** aeroflow casing permits swift easy cleaning.
- ★ All arithmetical problems of addition, subtraction, multiplication and division are carried out in SILENCE.

Write or phone Sumlock Limited NOW for a demonstration with this unique machine on your own work.

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Branch Offices for Sales and Service at: Belfast, Birmingham, Bristol, Cardiff, Glasgow, Leeds, Leicester, Liverpool, Manchester, Newcastle, Nottingham, Sheffield, Southampton

nics), Ltd. One model, known as the *Reporter*, is driven by a clockwork motor, and the other by dry batteries—both models are, therefore, completely independent of electric mains.

The *Reporter* takes a 600ft. tape spool, gives 15 minutes' recording, and the amplifier (with three miniature valves) of this machine runs from small dry batteries. Actual running costs are said to amount to less than one penny for a 15-minute spool.

The other machine, known as the *Personal*, has an electric motor fed by dry batteries, instead of the spring motor. This model can be supplied with 7½ or 15ins. per second tape speeds.

Either model can be used for dictation during car journeys, etc., with the aid of a lapel microphone, and it is even possible to dictate while driving. There is only a single control on the machine, and the completed spool can be played back on any of the manufacturers' standard machines.

A range of these machines, some using tape and others wire as the recording medium, will also be on show.—(*Wirek (Electronics), Ltd. Stand F.30, Olympia.*)

Protect Cash

CASH or jewel boxes made on an entirely different principle to the ordinary japanned tin box are being shown by Samuel Withers and Co., Ltd. They are

There are no seams or joints in this cash box and it screws down to the table.

pressed from a single steel plate, ⅛in. thick, and there are, therefore, no seams or joins, and this greatly adds to the strength of the box.

A further feature is a detachable bottom plate, which is locked in position by the same lock which secures the lid. This bottom plate can be screwed down to a desk, counter, etc., so that when the box is locked it cannot be removed bodily.

There are four sizes of this cash box, and each is fitted with a removable divided cash tray. A four-lever unpickable lock automatically double-locks the lid when it is closed.

On the same stand will be a range of thief- and fire-resisting safes, which all feature the 12-corner bent steel principle. Various sizes and interior arrangements can be provided to suit different requirements. — (*Samuel Withers and Co., Ltd. Stand F.68, Olympia.*)

Reviews of interesting products displayed in other sections of the B.I.F. will be found on the following pages :

STATIONERY SUPPLIES - Page 134
INDUSTRIAL EQUIPMENT - Page 104
WELFARE EQUIPMENT - Page 125
CANTEEN EQUIPMENT

"MAGNALINE"
Magnifies the line to be typed and deals effectively with difficult handwriting or figures

- WILL SAVE YOUR EYES
- WILL SAVE YOUR TIME
- WILL INCREASE YOUR SPEED
- WILL BETTER YOUR WORK

FOOT CONTROL
Cable length 60in.
Special lengths
Supplied to order.

Effortless and errorless copy typing is made possible with the Lindicator. Without interrupting her typing rhythm or looking away from her copy the typist merely touches the FOOT CONTROL which automatically brings the next line to be typed into view under the MAGNIFYING BAR. This so magnifies the whole line that any handwriting, pencilled corrections or marginal alterations become quite clear. With both hands thus left free to operate the keyboard, typing speed is increased & valuable time saved

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With the neat, visible Expandex filing system, anyone, from office boy to director, can find any paper at any time — and enjoy it! It's a pleasure all round. It stimulates efficiency in the office, and boosts morale.

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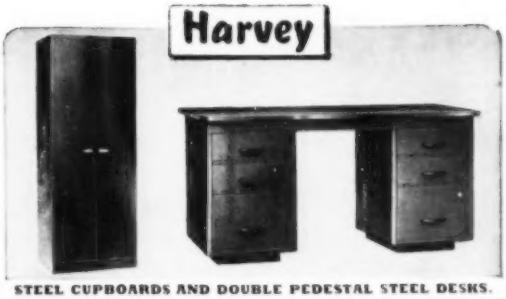
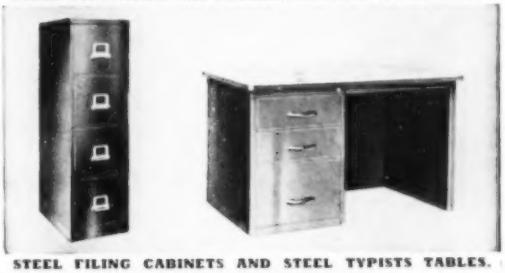
Harvey

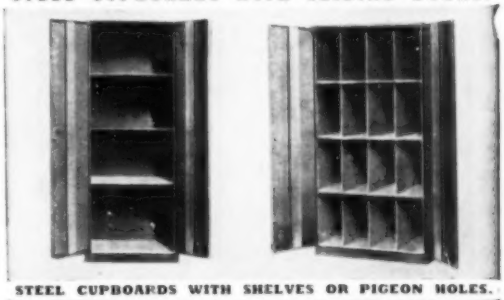


STEEL CUPBOARDS AND DOUBLE PEDESTAL STEEL DESKS.



STEEL FILING CABINETS AND STEEL TYPISTS TABLES.

STEEL CUPBOARDS WITH SLIDING DOORS.



STEEL CUPBOARDS WITH SHELVES OR PIGEON HOLES.

All Harvey Steel Office Furniture and Equipment is of modern design, sound construction, and of the highest quality. Finished in Olive Green stoved enamel it is perpetually durable, fire-resisting, and proof against damp and vermin. Prices are competitive. Send for Catalogue No. BU800

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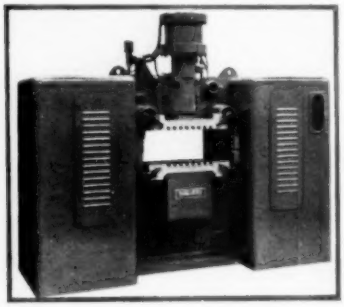
BIF HIGHLIGHTS 1952

of Interest to You

Equipment for the Factory

Much from Little

EQUAL in performance to the normal 300-kVA. machine is the type *P.A.D.* 100-kVA. projection welder. Although its rating is only one-third of other equivalent machines, it can tackle welding fabrications as efficiently as its larger predecessors. Several departures in design and general appearance are incorporated in the new welder, and among its special features are the transformer arrangement, which is designed to give a high secondary current.



New in design and appearance.

The *P.A.D.* 100 is equipped with an 8ins. diameter pressure cylinder developing up to 4,000lb. ram pressure. Another notable feature is the large clearance for jigs and fixtures, and unloading of finished components is simplified as these are ejected on the opposite side to the loading position, ensuring a steady production flow.—*(Sciaky Electric Welding Machines, Ltd., Farnham Road, Slough, Bucks. Stand C.222, Castle Bromwich.)*

Cold Welding

NEW metallurgical technique that could revolutionize such processes as spot welding, brazing and riveting, especially of aluminium and other highly ductile metals, will be demonstrated on the stand of the General Electric Co., Ltd.

Known as cold pressure welding, the process enables metals to be joined with a homogeneous weld produced solely by pressure at room temperature. Neither electricity nor heat is necessary, and no flux, chemical or gas is used. The technique is based upon the fact that if metals are forced to "flow" under substantial pressure the molecules in the separate pieces of metal can be forced into such intimate contact that the pieces will flow together at the boundary and form a perfectly homogeneous join.

The process has already been applied to the attaching of spouts, handles, etc., to aluminium vessels.

Samples of these and other applications of the new technique will be displayed on this stand.—*(General Electric Co., Ltd., Magnet House, Kingsway, W.C.2. Stands C.503 and 402, Castle Bromwich.)*

Safe Feeding

OUTPUT obtained from a machine such as a press is vastly increased when the flow of material to it can be made regular and continuous. Automatic stock reels ensure this regularity, and a new model will be featured on one stand at Castle Bromwich.

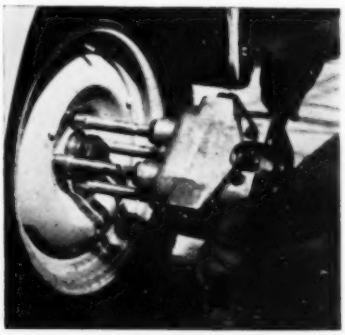
The device has a power-operated lifting mechanism, which means that the coil of material need only be rolled into position on the cradle. It is then automatically raised to the correct position when a button is pressed. Coils of metal up to 20ins. wide and with a maximum outside diameter of 48ins. can be accommodated.

Another new device to be shown by the same manufacturer is the *Multi-Stop*, which protects dies and tools by stopping the machine if the material being fed buckles or runs out. It can also be used to control material width and thickness, and can be set to cut out the machine when predetermined limits are exceeded. — *(Rockwell Machine Tool Co., Ltd., Edgware Road, N.W.2. Stand D.159, Castle Bromwich.)*

Speeds Assemblies

A DEVELOPMENT which can make considerable economies in time and labour on assembly lines will make its debut at the B.I.F. It is a new powerful pneumatic motor which is designed for operating multiple nut and stud runners. The motor is only 1⅞ins. in diameter and 6½ins. long, and weighs 2lb. 9oz. It develops nearly ¾-h.p. with a torque base of 500-inch-lb.

Because of its compactness and light weight, it makes possible the multiple tightening of closely grouped nuts; the motors can be grouped together down to two-inch centres. Easy handling is also ensured by its lightness, and the operator feels no torque reaction. The motor stalls against controlled air pressure, and this ensures complete uniformity of tightening, and ½in. and ⅝in. nuts can be run down to the optimum tightness. No further checking is necessary because



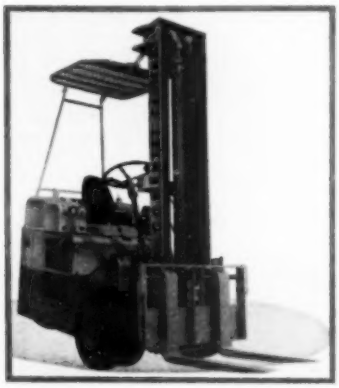
Gang-tightening the nuts on a motor-car wheel.

the torque is automatically controlled by pressure regulators.

Other portable power tools will also be on display. — (*Desoutter Bros., Ltd., The Hyde, Hendon, N.W.9. Stand C.415, Castle Bromwich.*)

Newest and Smallest

SMALLEST and latest addition to the *Climax* range of fork lift trucks is the *TSM*. This



This Climax truck lifts 6,000 lb.

model has a capacity of 1,500lb., and has been designed especially for use in narrow gangways and other confined spaces. It goes through a doorway 3ft. wide and 6ft. high, fully loaded, and can turn in a 56ins. radius, or negotiate intersecting aisles 55ins. in width. Power is supplied by a four-cylinder 8-h.p. petrol engine, and the gearbox gives two forward and two reverse speeds. Loaded travelling speed of the *TSM* is 6½ m.p.h. Lifting speed of the forks is 40ft. per minute, and the angle of tilt is 10 degrees back and 3 degrees forward.

The whole range of *Climax* trucks, which have capacities up to 6,000lb., will be shown at the B.I.F.; they can have either Diesel or petrol engines.—(*Coventry Climax Engines, Ltd., Widdrington Road, Coventry. Stand 1342, Castle Bromwich.*)

Gas Torches

OXY-ACETYLENE blowpipes marketed under the name of *Cutogen* include models for general-purpose cutting and also for a variety of heavy-duty work.

The No. 5 torch is suitable for cutting up to 12ins. of steel, and, with suitable attachments, it can be used for gouging, rivet washing, piercing and powder cutting. Standard sizes of this model are 18 and 24ins. long, but other lengths and special angle heads can be supplied if required.

For heavy-duty work there is the No. 3 torch, which has a length of 27ins. Up to 20ins. of steel or 15ins. of cast-iron can be handled by this model.

A universal cutting machine with several new features will be on the same stand. A new transmission and a cutter designed for use with a one-piece nozzle that enables the machine to be converted easily to powder cutting when profiling stainless steel are the most notable improvements.—(*British Oxygen Co., Ltd., Cleveland Row, St. James's, S.W.1. Stands D.201 and 100, Castle Bromwich.*)

Automatic Detective

LARGEST field of application for *Metaltector* products is in food manufacturing, though they have also proved of value in other processes. The equipment is used for the electronic detection of metal particles in raw materials and finished products, and the units are completely automatic in operation—unlike X-ray equipments designed for the same purpose. The manufacturers will introduce a completely new multi-channel unit at this year's B.I.F. Several detecting heads can be operated simultaneously with this equipment, giving independent control of individual production lines.

The products under examination are made to pass through appropriately shaped "windows." If a metallic contamination is present an electronic control unit reacts and gives visual or audible warning, stops the conveyor belt, and/or drops a marker on the band.

The Metaltector checking cakes.

(Photo: MacFarlane Lang & Co. Ltd.)

GOOD MARKS

Drums, containers, packing cases, hessian sacks, metal sheets, etc., can all be printed and marked quickly with the Pak-Print process. This marking process operates equally well on flat or curved surfaces and can print in several colours in one operation. For example 500 five-gallon drums can be marked in an hour by one unskilled operator. (Kingsbury Components Ltd., Oxford Ave., Trading Estate, Slough, Bucks. Stand F.66, Olympia.)

In this way the imperfect specimen is pin-pointed, saving much production time or even the destruction of the suspect batch.—(*Loma Electronic Equipment, Ltd., 27-29, Union Street, S.E.1. Stand B.50, Olympia.*)

Attractive Walls

SMOOTH-FINISH material for internal decoration of cement, concrete, plaster, etc., will be shown for the first time by Sealocrete Products, Ltd. This material has been so compounded that it does not react with the lime in the cement, thus softening and turning yellow.

Dust from concrete floors can be a menace to workers and machines alike. Preparations will be shown which eliminate this dust when applied to concrete surfaces.

Various other products will also be included in the display, such as *Waterbar*, a material which ensures that joints are watertight

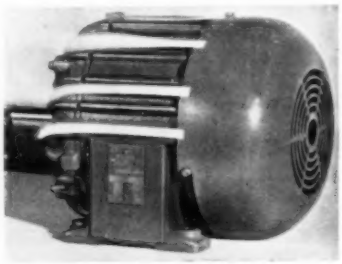
when basements, underground tunnels, etc., are being constructed. —(*Sealocrete Products, Ltd., Hythe Road, N.W.10. Stand B.614, Castle Bromwich.*)

Enclosed Motor

TO be introduced by Brook Motors, Ltd., at the B.I.F. will be a new totally-enclosed fan-cooled electric motor. Known as the *TC* type, the motor has been designed, after careful research, to give the maximum transfer of heat from the windings to the outside atmosphere. The system of internal and external cooling fins adopted has proved so successful that ratings as high as those for protected motors have been achieved with totally-enclosed models.

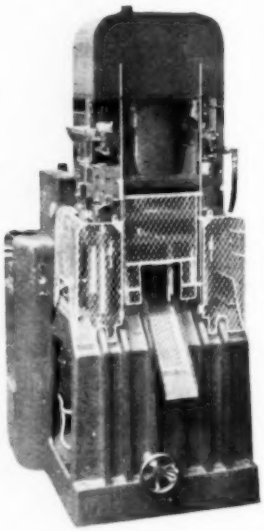
The motors are available in sizes from 2-100-h.p. The completely sealed electric windings enable them to operate in very damp or dusty atmospheres.

Another new-comer to this stand will be the *B.S.66*, a fractional h.p. motor. It incorporates several new features, including preloaded bearings in cartridge housings to ensure quiet running.—(*Brook Motors, Ltd., Empress Works, Huddersfield. Stand C.304, Castle Bromwich.*)



Ratings as high as those for protected types can be obtained with this totally enclosed motor.

PUTS ON THE PRESSURE



This preforming machine exerts a pressure of 125 lb. per square inch over an area of six inches in diameter. It can be seen at Castle Bromwich producing phenolic mouldings in conjunction with a hydraulic press and radio frequency heater. Fully automatic operation can be carried out and even when fabric filled materials are being moulded semi-automatic operation is possible. (T. H. & J. Daniels, Ltd., Stroud, Glos. Stand D.310, Castle Bromwich.)

Dehydration

ALTHOUGH Birlec, Ltd., manufacture a wide range of gas and electric furnaces, as well as drying equipment, they are again concentrating their display at the B.I.F. on their range of *Lectro-dryers*. This equipment dehydrates air (particularly compressed air), process gases and certain organic liquids. Three samples of dryers will be on show; two will be of the "dual absorber" type, which have two beds of absorbent material. These operate in turn so that whilst one bed is actually drying, the other can be re-activated.

A typical example of one of these "dual absorbers"—the *BWC 150*—has been designed to dry 560lb. of carbon dioxide per hour for "dry ice" production. Another interesting model, the *CHE*, controls the humidity in storage, processing and packing rooms or other enclosed spaces, and finds application in many different industries.—(*Birlec, Ltd., Tyburn Road, Erdington, Birmingham, 24. Stand D.509, Castle Bromwich.*)

Two-in-one Printer

MAIN feature on the Ozalid Company's stand will be the *Duplex Ozaprinter*, which is designed for rapid print-making in large organizations. The machine uses the ammonia dry developing process, and both developing and printing are carried out by the same machine. Both processes are controlled by the operator from the same seated position, and a finished print ready to handle is produced in a matter of seconds. Printing light is provided by a single high-power quartz tube, which ensures uniform illumination over the full width of the machine. A fractional control gives a speed range of from zero to 10ft. per minute. A reverse position is also provided.

An ingenious exhaust system removes all the fumes of the ammonia, and even renewing the supply can be effected without leaving an unpleasant smell.
—(*Ozalid Co., Ltd., 62, London Wall, E.C.2. Stands D.606 and 707, Castle Bromwich.*)

No-clutch Truck

OUTSTANDING feature of *Conveyancer* fork lift trucks is their automatic turbo drive; this drive has no clutch or conventional gearbox and lever, with the result that driving controls are reduced to a minimum—there are only three—and the frequent servicing necessary with clutches is eliminated. Models can be driven

Turbo-drive fork truck.

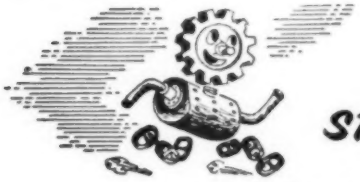
Hold on to SCRAP

and you hold up STEEL PRODUCTION

Search out every ton of scrap in your works and turn it in. Old plant, redundant buildings, machines and spares — it's all wanted back in the steelworks to keep up steel production. Round it up and put it in the hands of your local scrap merchant. It will go to make the new steel that you and every other steel user need so urgently.

Scrap merchants are glad to help with dismantling and collection.

WHEREVER YOUR NEW STEEL *comes from, please return your scrap to merchants in your own locality. That will save unnecessary transport, and time, before the old scrap is turned into the new steel all steel users want.*



SPEED THE SCRAP
SPEED THE STEEL

Issued for the STEEL SCRAP DRIVE by the British Iron and Steel Federation, Steel House, Tothill Street, London, S.W.1

S.22

by petrol or diesel engines, or by battery-operated electric motors.

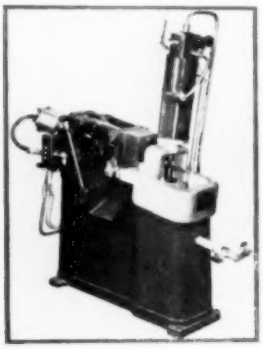
The capacities of the different trucks vary between 6,000lb. and 2,000lb.

An interesting feature of the stand will be a projection theatre, where a 35-minute 16mm. film, entitled "Fork Lightening," will be shown during the exhibition. The film deals with the manufacture and applications of *Conveyancer* fork trucks.—(*Rubery, Owen and Co., Ltd., Darlaston, S. Staffs. Stands D.616, 717 and 1358, Castle Bromwich.*)

Combined Exhibit

SEVERAL firms' products will be seen on the stand of Alfred Herbert, Ltd., and among them will be Die-Casting Machine Tools, Ltd., who will have their *Imp/96* air-operated die-caster on display. This machine has a pilot-operated impact type injection cylinder with slide valve in the head, controlled by finger-tip trip lever.

A safety interlock valve prevents metallic injection before the



The Imp/96 die-caster gives high pressures from 80 lb. air lines.

dies are fully closed. A new double-toggle air-operated die-unit has an increased capacity and locking load; higher pressures can now be exerted on the moulding metal from normal air line pressures of 80 to 100lb. More uniform and homogeneous castings are the result. Consumption of the *Imp/96* is only 0.55 cubic feet of free air per cycle of operation.

Alfred Herbert, Ltd., themselves will be showing a *Herbert Type HY* semi-automatic injection moulding machine for thermoplastic materials. The machine has a locking pressure of 30 tons. The moulding capacity is 1½oz., and the maximum moulding size is 12¼ by 11ins. The powder feeding device is adjustable and self-compensating.

Instruments for the rapid checking of screw-threads, gears and profiles of all kinds will be shown by two firms on the same stand: Sigma Instruments and Hilger Instruments. As many as 28 dimensions can be checked simultaneously with one of these instruments, and components can be segregated according to dimensional accuracy.—(*Alfred Herbert, Ltd., Edgwick Works, Coventry. Stands D.310, 218 and 321, Castle Bromwich.*)

Loads Drums and Crates

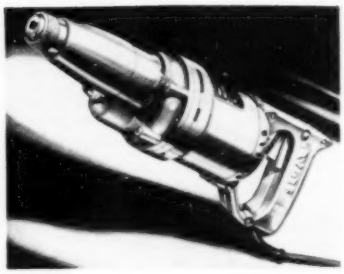
THE *Hydrum* range of mobile stackers and loaders reduces the labour involved in handling drums, casks, bales, pallets, etc.

One of the most interesting is the *L.P.* Barrels, etc., are rolled on the projecting prongs of the loader, the motor is started by a foot pedal, and the load is swung through 90 degrees up to the back of a truck or platform. Lifting a load from ground to lorry takes only five seconds, and with two operators the machine can handle a ton a minute.—(*R. H. Corbett and Co., Ltd., Hydrum Works, Burgess Hill, Sussex. Stands 1347 and 1246, Castle Bromwich.*)

Straight-handled Irons

RECENTLY added to the *Wolf* range of soldering irons are three new models which will make their debut at the B.I.F. These are all of the straight handle type essential for electrical and instrument work, particularly on complicated radio or telephone equipment. A heat deflecting skirt is provided for the comfort of the operator, and the irons may be used for long periods without switching off.

A wide range of *Wolf* portable electric power tools, including grinders, polishers, sanders, hammers and saws, will also be displayed.—(*Wolf Electric Tools, Ltd., Hanger Lane, W.5. Stand C.603, Castle Bromwich.*)



Wolf heavy-duty nutsetter.

Clean Air

EQUIPMENT for cooling and ventilating, dust collection and exhaustion will occupy the stand space of Keith Blackman, Ltd.

Among the equipment to be shown is the *Tornado* W.1100 wet type dust exhausting and collecting unit. The equipment is designed for the removal of dust created in industrial processes, which would otherwise damage the health of workers or cause fire, or even explosions.

The collected dust is deposited

JET CLEANER

The Speedylectric mobile steam jet cleaner can be seen on stand C.711 and will also be demonstrated on the manufacturer's outdoor stands every day. It is claimed to be 98 per cent. efficient and the lightest and most compact steam jet cleaner on the market. (Bastian & Allen, Ltd., Ferndale Ter., Harrow, Middx. Stands C.711, 1321 & 1320, Castle Bromwich.)

AN INVITATION TO . . .

A Private View

The management of Randalrak Ltd. cordially invite you to a Private View of their new range of Administrative Office furniture

"REFERENDUS"
(Trade Mark)

at their showrooms Victoria Street, London, S.W.1.
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R.S.V.P. on coupon below for official invitation.

'REFERENDUS' FILING FURNITURE

(incorporating Patent 'Lift-out' Drawers)

specially designed for the Executive's office

YOUR OFFICE NEEDS IN ONE UNIT

A wide range of models to suit every purpose can be inspected in comfort by filling in the coupon below.

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BIF HIGHLIGHTS 1952

EQUIPMENT FOR THE FACTORY

HEAVYWEIGHT TRACTOR

The combined skill of Rolls-Royce and Vickers-Armstrong has resulted in the appearance of the VR180 heavy truck type tractor. The first production models are being shown by the distributors Jack Olding & Co. Designed for earth moving and similar work, and powered by 180-h.p., 6-cylinder oil engine, the VR180 is designed to operate under arduous conditions at home and abroad. Equipment including dozers and scrapers has been developed to match the tractor. (Jack Olding & Co., Ltd., Hatfield, Herts. Stand 1334, Castle Bromwich.)

as a sludge, which can then be disposed of in a coagulated form; the unit is completely self-contained with its motor starter and sludge collecting truck.—*Keith Blackman, Ltd., Mill Mead Road, N.17. Stands D.755 and 654, Castle Bromwich.*)

Controlled Time

TRIBUTE to the efficiency of the controlled electric clock system is implicit in the fact that all the clocks throughout the offices and buildings of the B.I.F. will be controlled by the master clock on the stand of Gent and Co., Ltd.

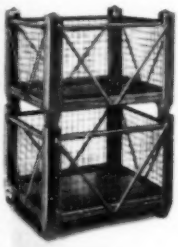
Another exhibit is an ingenious piece of apparatus of particular interest to those concerned with the measuring of liquids in tanks, reservoirs, etc. This device can be connected to a normal G.P.O. telephone line, and it is then possible to ring the number of the instrument in the equipment from any ordinary telephone and be notified automatically of the depth of liquid in the tank.—(*Gent and Co., Ltd., Faraday Works, Leicester. Stand C.407, Castle Bromwich.*)

The Tornado W.1100 converts dust into harmless sludge.

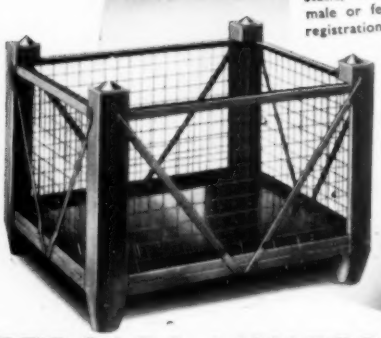
Inside Information

THE range of *Matrix Micro-Maag* micrometers is available in sets to cover the measurement of bores from ¼in. to 8ins. in diameter. The instruments allow direct measurements to be made to very fine limits of accuracy, and are designed for use in production control departments, to detect wear on dies and tools, and to en-

Safety Stacking



Capable of carrying one ton mobile or five tons static, "Victrolec" Weld Mesh Pallets incorporate male or female corners which ensure definite registration of feet when stacking. Made entirely of steel with heavy gauge wire mesh sides, they are ideal for factories, warehouses, etc.
Write for further details.



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ALL STEEL
STILLAGE RACKS & PALLETS

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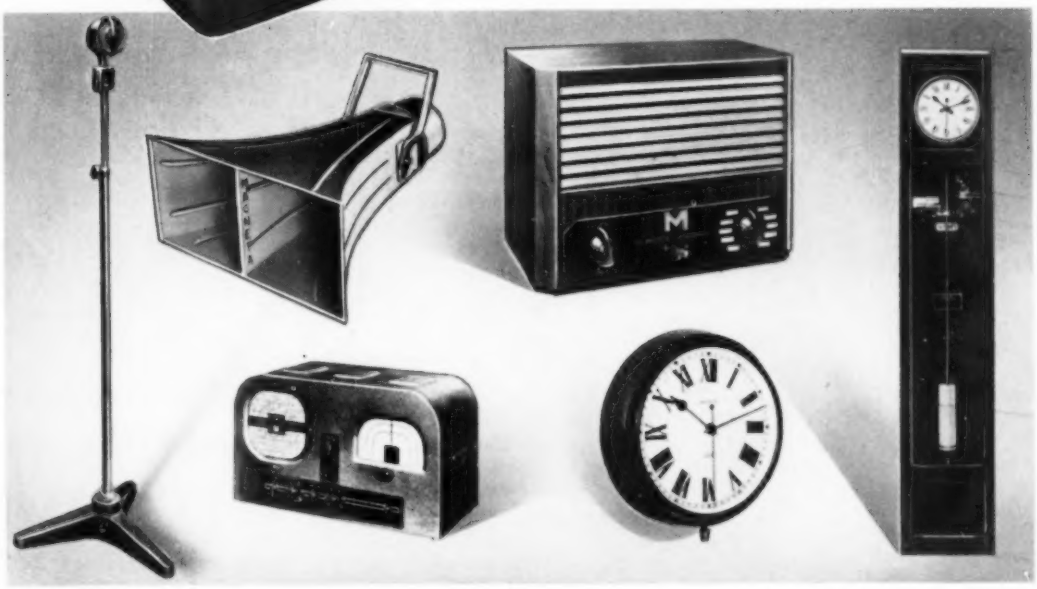

THE MAGNETA TIME COMPANY LTD

GOBLIN WORKS · LEATHERHEAD · SURREY

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Telephone: - - - HOLborn 9762

able machine operators to check the progress of their work.

A feature of the instruments is a plastic finger grip. When this is pulled it releases the measuring anvils, allowing the micrometer to be withdrawn immediately and safely.

Extension pieces make it possible to measure bores to a depth of 15ins. with some of the *Micro-Maag* instruments. — (*Coventry Gauge and Tool Co., Ltd., Fletchhamstead, Coventry. Stand C.319, Castle Bromwich.*)

Precision internal micrometer.

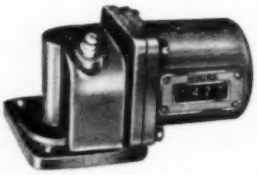
Eight New Machines

NO fewer than eight new machines will be on the stand of F. J. Edwards, Ltd. These include five machines for engineering and sheet metal work and three for woodworking.

Of the metal-working machines, four are hand operated. The *Type M* wheeling and raising machine will remove buckles, creases and dents from rolled, pressed or beaten sheet metal. Shaping can also be done between its rollers. The *Type E* bending rolls are for producing cylinders from sheet metal. The first of the three bright steel rollers swings out to enable completed cylinders to be removed without distortion. Another hand-operated machine is the *G.A.7* shearing, section cropping and notching machine. It is mounted on wheels, and has been specially designed to meet the needs of structural engineers and others who do "on site" cutting of steel plates, bars and sections.

Both of the other two new metal-working machines are for sheet metal forming. One is a

ENGINE CHECKER



Running costs and fuel consumption of internal combustion engines can be accurately checked by a simple little instrument that keeps a record of hours run. Driven from the camshaft, crankshaft, fuel pump or any other convenient mechanism, it tots up the running time to a maximum of 10,000 hours. (English Numbering Machines, Ltd., Queensway, Enfield, Middx. Stand D.163, Castle Bromwich.)

Without Reservation—

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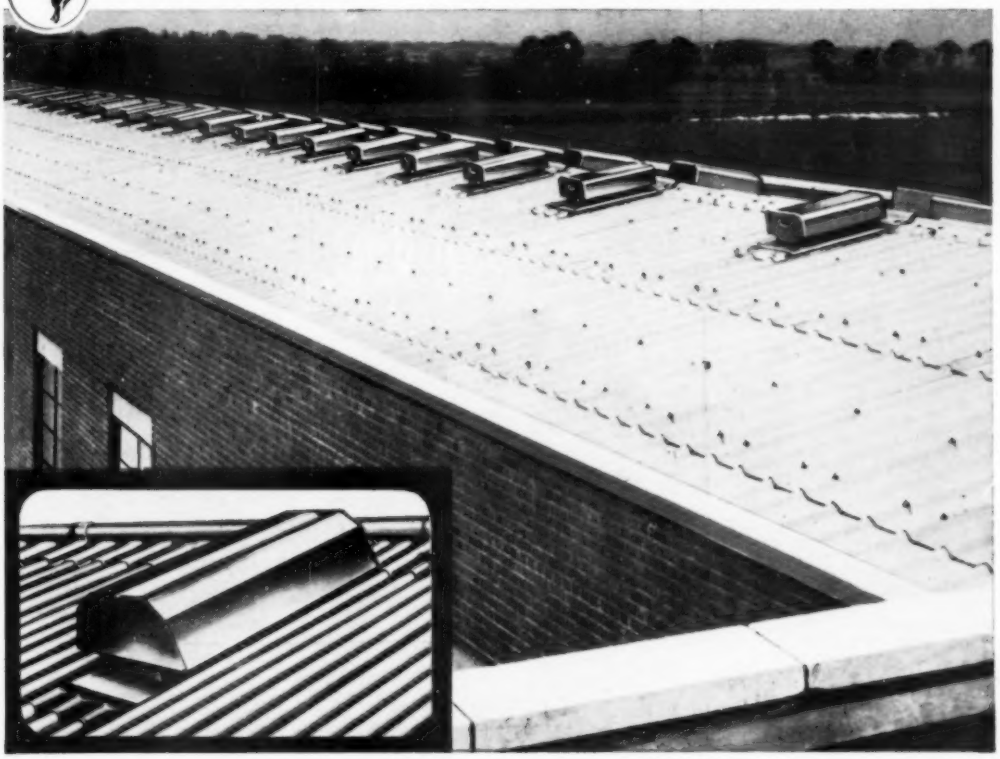
GROSVENOR HOUSE, PARK LANE, W.1. *Tel: GRO 6688*

BIRMINGHAM 92, Broad Street | BRADFORD 14, Manor Row | BRISTOL 53, Park Street | GLASGOW 5, St. Vincent Place | SHEFFIELD 167, The Moor | MANCHESTER 63, Whitworth St.

SEE COLT ABOUT VENTILATION—WHATEVER YOU DO



At Vandervell Products Ltd—

. . . . . VENTILATION *by* COLT

The smaller illustration shows in more detail a Colt S.R. Extractor type ventilator.

The factory of Vandervell Products Ltd., at Maidenhead, is modern in every way. This is particularly true of its ventilation system, consisting of a series of Colt S.R. type ventilators, shown in the larger illustration. They have a powerful extracting effect without mechanical assistance. Whatever the work or process being carried out in any factory, Colt ventilation will ensure a good clear working atmosphere. Colt are ventilation experts and can as easily improve existing systems as plan for new premises. *Write for a free manual which gives full specifications of the types of standard Colt Ventilators available to Department G.8* **120**

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G.8

power-operated press brake that can handle 12-gauge sheet up to 48ins., or 14-gauge sheet up to 60ins. wide. The other is a swing beam, double-geared, universal folding machine for sheet steel up to ⅛in. in thickness and 6ft. 2ins. wide. Flanges, angles, channels and four-sided trays, etc., can all be produced on this machine. —(*F. J. Edwards, Ltd., Euston Road, N.W.1. Stand D.411, Castle Bromwich.*)

Model 60 press brake.

Air Service

FEW exhibitors at Birmingham will be able to rival the service offered to enquirers by Colt Ventilation, Ltd. People interested in this firm's range of heavy industrial ventilators will be able to arrange on the stand for their premises to be surveyed, and the orders for the equipment will be flown back to the head office in London by the firm's own aircraft.

Apart from the range of ventilation equipment, Colt products on display will include samples of *Colterro* plaster lathing, which consists of electrically kilned clay moulded on a wire mesh base. This material gives a homogeneous base for ceilings, partitions and outside walls. It may be twisted and curved to any shape and is supplied in rolls. Once set, the *Colterro* base is rigid and strong, and only two coats of plaster are needed, instead of the usual three. Other advantages claimed for the lathing are its immunity to vermin, rotting and fire, and the high degree of sound-proofing it affords. —(*Colt Ventilation, Ltd., Surbiton, Surrey. Stand B.506 Castle Bromwich.*)

Colt clear-opening ventilators.

New Diesel Lifter

DIESEL-ENGINED fork lift trucks are rapidly becoming popular, and a new model—the *Stacatruc 2DH/9*—is making its first appearance at the B.I.F. Useful features which reduce the risk of fire are fitted to the air intake

Profitable **TIME**

Gents' Fully Automatic Time Recorders and Controlled Electric Clock Systems ensure a reliable and foolproof record of "clocking in" and accurate synchronized time throughout your organisation, entirely unaffected by mains fluctuation. Turn those non-productive minutes into profitable time. The answer is quite simple, write for comprehensive literature giving full details of . . .

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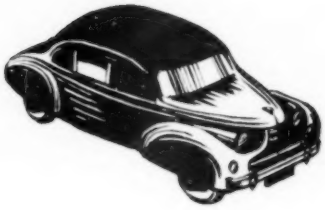

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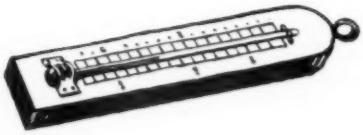

Nowadays the car that's made in England seldom stays in England. It's quite likely to go to Lapland or Labrador—to face very un-English temperatures—thirty or forty degrees of frost!

So the maker of car engines, if he's thorough, tests them in savagely low temperatures. And the maker of car parts like carburettors and electric starters does the same. Refrigeration helps the car industry. And the car accessory industry. And many more industries than most people realise!

If you've a cooling problem, consult

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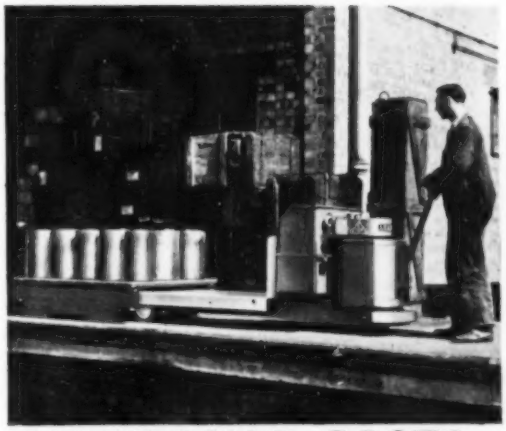
CAN CUT YOUR



HANDLING COSTS

The Elevating Platform Truck (top) is designed to handle low platform stillages.

Simple to operate and easy to maintain, it has a carrying capacity of 1 ton and a speed of 4-6 m.p.h.

Illustrated (centre) is the "Leader" 2-3 Ton Elevating Platform Truck, a simple self-propelled truck which will solve many problems of moving heavy goods from point to point in your factory or works.

See us on STAND B.4. Grand Hall, Mechanical Handling Exhibition.

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and Broadway Court, Broadway, London, S.W.1. *Tel. Abbey 2272/3*

and exhaust outlets, and an air-operated starter motor replaces the more normal electric one. The Diesel motor is capable of developing 40-b.h.p. at approximately 2,000 r.p.m.

A grab device which eliminates the need for pallets for a range of mechanical handling operations will be shown fitted to a *Model 30EH/9* fork lift truck. This grab can handle bales, barrels, packing cases, drums and other containers by clamping them between two arms. The arms are hydraulically operated. The movement of the arms ranges from approximately 16ins. to 60ins., and their load-carrying capacity is one ton.—(*Industrial Truck Developments, Ltd., Ladbroke Grove, W.11. Stand 1356, Castle Bromwich.*)

High-level Heater

WARMING factories and other buildings where unrestricted space must be available below overhead travelling cranes, etc., requires something different from the normal run of heater. Suitable for this job is a new unit heater designed specially for high-level mounting. It operates on the vertical discharge principle and will be seen among a representative display of heat transmission equipment. —(*The Spiral Tube and Components Co., Ltd., Osmaston Park Road, Derby. Stand D.710, Castle Bromwich.*)

Tests on the Spot

WORKING on the 136 deg. diamond indenter principle is the *Penetrascope*, a portable hardness tester.. The indenter is operated by a hydraulic thrust unit, and no outside power is needed. The load is instantly variable by the turn of a hand wheel eliminating the need for changing weights. The diamond indentation in the metal under test is examined through an illuminated microscope. The width across the diagonals of the indentation is measured on the micrometer counter as a decimal of a millimetre, which is converted to diamond pyramid hardness num-

SELF RAISING

This equipment is a mobile rising platform mounted on a hydraulic ram and fitted with either a hand or electric pump. It lifts the operator to any working height up to a maximum of between 18 and 30 feet, depending on which of the four models is in use. (William Moss & Sons, Ltd., North Circular Rd., Cricklewood, N.W.2. Stand D.738, Castle Bromwich.)

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By eliminating wasteful gangways this system increases storage capacity by 50% leaving all goods easily accessible.

Every inch of space is used to the best possible advantage only one gangway being required for three, four, or even more rows of shelving. Plan your stores on these lines and save TIME, SPACE AND MONEY.

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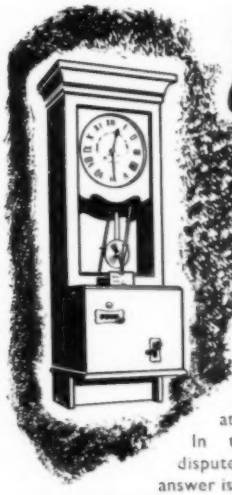

One of the main jobs of a Gledhill-Brook Time Recorder is to record "attendance" time—the arrivals at, and departures from, works, stores, offices and other business premises. Another important function is to provide infallible printed statistics of actual time taken on a job. This information is recorded automatically. In the event of uncertainty or dispute the detailed and accurate answer is on the Gledhill Record Card—there can be no further argument!

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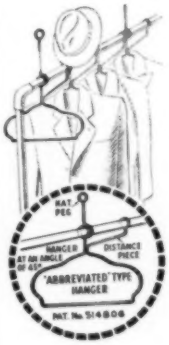
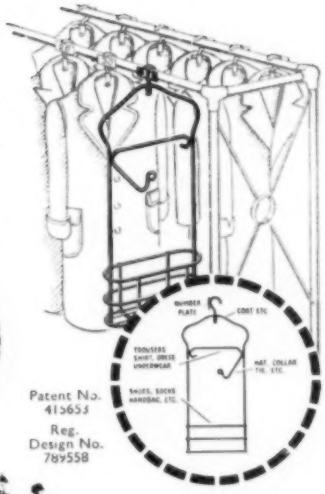
By installing the SIEBER HANGER SYSTEM in our Cloakrooms we have reclaimed two-thirds of the space for production, and it has only cost us one-third of what we anticipated. There are no running costs and the workers' clothes are properly cared for in keeping with the New Factory Act. What is more—they all like it!





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Best thing yet—putting in that Hanger System—better than hooks or airless lockers. At last our wet clothes get a chance to dry in proper shape, aired ready to go home—without smelling like an old cupboard.

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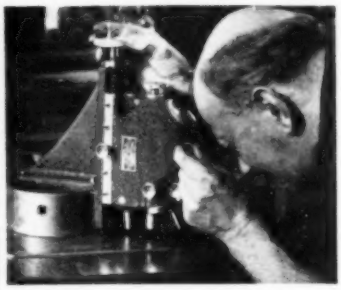
Various clamps can be provided



The Penetrascope in use with a magnetic clamp.

for holding different samples to be tested.—(*Cabul Tool Co., Ltd., 46, Battersea Bridge Road, S.W.11. Stand C.319, Castle Bromwich.*)

Arrests Tramp Iron

UNPLEASANT results could follow if stray metal particles, known as "tramp iron," found their way into food, textile, confectionery or plastic products during manufacture. One way to prevent this happening is to test raw materials, etc., with magnetic separators. A new range of separators will be seen at Castle Bromwich, designed for use in wet or dry processes.

Other new products on this stand will be a self-cleaning drum separator and a vibratory chute for transporting powders, such as salt or cocoa. — (*Rapid Magnetic Machines, Ltd., Lombard Street, Birmingham, 12. Stand C.421, Castle Bromwich.*)

New Crusher

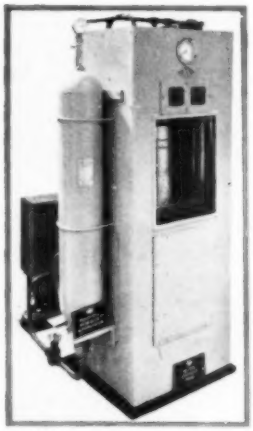
LATEST addition to the range of British Jeffrey-Diamond crushing, pulverizing and grinding machines is the 10 by 5ins. *Intermediate Atomill.* This machine is generally similar to previous models, except that it is smaller in size and capacity, and certain improvements have been made in the design. The unit is completely self-contained, and it is enclosed in a steamlined

enamelled steel cover, which also guards the "V" rope drive.—(*British Jeffrey-Diamond, Ltd., Stannard Works, Wakefield, Yorks. Stand D.528, Castle Bromwich.*)

Self-contained Presses

THE latest development of Finney Presses, Ltd., is a 15-20-ton open throat press for the arboring, assembling, straightening, etc., of machine parts. The press is completely self-contained with the pump unit enclosed in the press body. Control is by a foot pedal or hand-operated valve, but, if necessary, a push-button solenoid control can be fitted for semi-automatic working.

Incorporated in the hydraulic system is a new hydro-pneumatic accumulator, which allows closing and pressing speeds of up to 4ins. per second, and also acts as a surge eliminator. This accumulator has a maximum working pressure of 3,000lb. per square inch and minimum of 2,000lb. p.s.i. Actual storage volume is 277 cu. ins., but



Upstroke press fitted with hydro-pneumatic accumulator.

other models with capacities of from 50-500 cu. ins. will shortly be available.—(*Finney Presses, Ltd., 27, Berkley Street, Birmingham, 1. Stand D.241, Castle Bromwich.*)

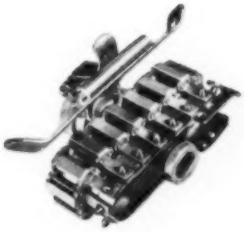
Adaptable Heaters

STEAM or hot water can be used to operate the *Universal* and *Forceflo* forced convection heaters, which are the two latest

ILLUSTRATED
by
LAMSON PARAGON

THE use of Paragon Continuous Forms in Tabulating machines is a *sine qua non* today for invoices, statements, wages records and many other purposes. Fully automatic form feed and precise registration of the printed copies is maintained scientifically by the "Formaliner" Tractor illustrated in the accompanying pictures.

"FORMALINER" FEED. An ingenious method of counteracting the natural tendency of a circular platen to disarrange the registration of a multi-copy set.



Six pins in a flat plane establish a firm grip with the sprocket holes of the forms and correct the distortion imposed by travel around the circumference of the platen.

No addition or adjustment to the tabulator platen is needed. The Formaliner Feed is a distinct and separate unit which can be added to the tabulator carriage and removed at will.

LAMSON PARAGON
SUPPLY CO. LTD.
LONDON, E.16
Telephone: Albert Dock 3232

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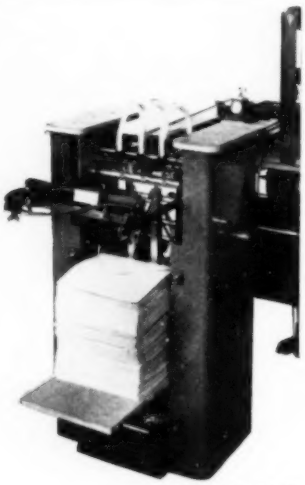
AUTOMATIC SUCTION FEEDS

FOR ADDRESSING MACHINES

★ Adaptable to most Models
Deep pile
Automatic selection
Automatic stop
Doubles control
Will feed Cards, Envelopes and Gummed Labels
Quickly attached and removed
Easy to run
Ball races and oil impregnated bushes fitted throughout
Front blow and separator springs
Easy to adjust
Also Roll Feed and Guillotine



See our Exhibits, B.I.F. Stand G40 Olympia

Patent applied for

Manufactured by:

AUTOFEEDS LONDON LTD

367a KING'S ROAD, LONDON, S.W.10.

TELEPHONE: SLOane 7732.

Fit a **TELLEF**

Can be fitted to ANY telephone — *in a minute!*

Price inc. Purchase Tax 12/6

Obtainable from :—
STORES—STATIONERS and DEALERS in Office Equipment

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The key to SAFEty fits the Jöli

Fire, Fall & Thief Resistive.

Mobile - Scientifically Constructed Guaranteed Fire Protective Properties - Unpickable drill proof locking - Interior Fittings adjustable - Door opening 270° Finish and value outstanding Deliveries ex Stock

JOELI SAFE CO. (LONDON) LTD
7, York Place, Adelphi, London, W.C.2.
'Phone: Trafalgar 3718

BIF HIGHLIGHTS 1952

EQUIPMENT FOR THE FACTORY

models to be produced by the British Trane Co., Ltd.

The *Forceflo* is best suited for installation in such premises as schools, whilst the *Universal* is an adaptable unit which can be supplied for mounting in any position, and is intended for industrial use. This latter unit has sound insulating panels to ensure quiet running.

Capacities of the units vary between 40,500 and 16,000 B.Th.Us. per hour according to the velocity of the air flow. — (*The British Trane Co., Ltd., Clerkenwell House, E.C.1. Stand D.330, Castle Bromwich.*)

Cuts Automatically

THE *Hancomatic* is a new oxygen cutting machine with a double carriage, which can be fitted with one or more cutting burners for single or multiple cuts. Three standard sizes are produced, either 40, 60 or 80ins. wide. The new machine can be fitted with a

continued on page 126

Definac

ACCOUNTING

the first name in Manifold Posting Methods covers the entire field of books and accounts, including PAYE, Stores and Costing, and always combines with

Definac

VISIBLE

the last word in visible recording. DEFINAC has been the first to supply in unique combination Multiple Posting plus Visible Cards.

Definac

Victoria House, Southampton Row, W.C.1. and 22 Hocroft Ave., N.W.2.

Tel: CHA 4338 & HAM 0261.

PERSONAL CONTACTS

Continued from page 59

the manufacturing side keeping in constant touch with their opposite numbers on the retail side. This has to be effective, or personal attention on each order would be impossible.

The board meetings themselves are a form of executive council, for the board meets informally nearly every week, and four out of five directors are working directors, each being primarily responsible for one aspect of the organization—sales, production, cloth buying and finance. There is no formal market research. Lionel Jacobson gets most of his information by the simple technique of dealing with every complaint personally.

This is easily done by virtue of the firm's advertising technique, which employs Jackson The Tailor as a personality—a genuine personality, inasmuch as he is Sydney Jacobson, who was asked to accept the role so that Lionel could see the whole problem of advertising impartially and without personal prejudice. The whole point, of course, is to create in the minds of the customers the idea that there is a Mr. Jackson who is personally interested in their problems. The drawings are of Mr. Sydney Jacobson, though the family resemblance leads many people to think that Lionel is Jackson The Tailor. The same idea is carried out in the booklets for customers, which are issued twice a year and describe new season's styles in cut and cloth.

The recent opening of three new branches in London was a concession to the enthusiasm of the management. "My executives were keen on the idea," said Lionel, "and I could see that it was the result of pride in the company. To them it was a demonstration of efficiency and of faith in the future of the organization. How, then, could I refuse?"

Today the retail turnover of Jackson The Tailor is 20 times what it was when Lionel and Sydney Jacobson joined their father in the business. Throughout that period the margin of gross unit profit has been consistently reduced, because the brothers are more interested in turnover than net profits or the number of branches.

POWER CUTS

AUTOMATICALLY SWITCH ON

this G.E.C. Emergency

LIGHTING SET

By locating one or more of these units in strategic positions, the risks of loss, damage or danger that may result from sudden darkness are eliminated.
Normally the battery is kept in a fully charged condition from the A.C. mains, through a built-in specially designed G.E.C. charger. When the mains input is interrupted a relay instantaneously switches on the powerful emergency lamps. Resumption of mains supply automatically switches the emergency lights off, and charging of the battery is resumed. The unit operates on 100/120v. or 200/250v. A.C. supplies of 40 to 100 cycles, and one or two 6 volt lamps may be operated from each unit up to a maximum of 60 watts.

THE GENERAL ELECTRIC CO. LTD., MAGNET HOUSE, KINGSWAY, LONDON, W.C.2

Faster and More Accurate Sorting Methods - Speed up Filing - Ledger Posting Invoicing - Dissection Costing

These advantages can be achieved by installing

AMBIDEX SORTOFILES

- ★ Letters, Invoices, Cheques, Cards and other office papers sorted DIRECT to 25, 50, 100 or more divisions.
- ★ Waste effort of extra handlings eliminated.
- ★ Fifty per cent. saving in sorting time.
- ★ All work following speeded up.
- ★ Instant reference to papers when required.
- ★ Clear headings ensure greater accuracy.
- ★ Minimum hand and eye travel.
- ★ Wide opening of hinged divisions for easy and rapid insertion of the papers.
- ★ Light and easy to use—finger-tip operation.
- ★ Papers cannot blow away or get mislaid.
- ★ Office space saved—50 divisions in the space of one pile on the desk.
- ★ Headings can be anything desired.

Details on request.

AMBIDEX EQUIPMENT CO
24, COLEMAN ST., LONDON, E.C.2.
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It's a pleasure to wash since the management have supplied...

CRESCO PAPER TOWELS

Ideal for every type of cloakroom. The Cresco Service offers Towels and Dispensers of all types, including Automatic Machines. Also Disposal Units for surgical dressings. Ample supplies always available.

Write to:
CRESCO LIMITED
Brougham Road Works, Worthing

You'll "register" everything with the

REGNA CASH REGISTER

DELIVERIES EX. STOCK

PRICE £90 0 0

ANALYSING
ADDING
LISTING UP TO
£999 19s. 11½d.

Proved in construction - Superior finish
Guaranteed service - Agents everywhere
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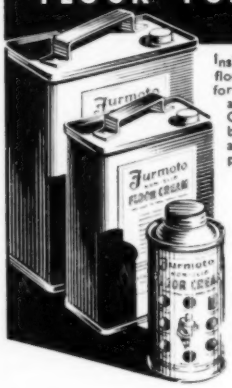
Phone : Trafalgar 3718.

The impossible achieved

a NON-SLIP FLOOR POLISH



Insist that your floors are made safe for visitors and staff alike. This Floor Cream gives a brilliant polish and on it, it is impossible to slip.

Awarded 64 Gold Medals throughout the world.

Furmoto

NON-SLIP FLOOR CREAM
Details of special terms for large users from
FURMOTO CHEMICAL CO. LTD.
1-3 BRIXTON ROAD, LONDON, S.W.9

Sheet Steel Shortage?

Turn to Masonite

Tempered Presdwood

This remarkable material has been used and **proved** for over 20 years. DIMENSIONALLY STABLE. Will not warp or buckle under the most trying conditions. Tough, durable, rot-proof. **Perfect** surface—unaffected by hard wear, knocks, water. Takes any finishing treatment.

Masonite Tempered Presdwood lasts indefinitely. Cabinets with Tempered Presdwood exterior have a solid and genuine 'air' about them. The buyer can see and feel the value.

This modern material with the old-fashioned stamp of quality and craft means

More Sales - Higher Output

Registered *Trade Mark*

MASONITE
MADE IN SWEDEN

Tempered Presdwood

Ideal for panelling, partitions, counters, laboratories, test rooms, assembly surfaces, trolleys, export packing cases, etc.

Write for samples and literature
MASONITE LTD., Bevis Marks House
Bevis Marks, London, E.C.3

RUBBER

BRASS AND STEEL

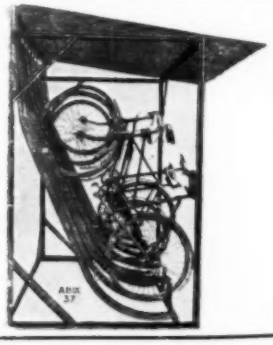
STAMPS

SEND TO-DAY FOR **96 PAGE CATALOGUE** *OF MARKING DEVICES*

JOHN T. CLARKE & SON LTD.
60, CHARLES STREET,
MANCHESTER, 1,
'Phone ARDwick 1515 (Three Lines)

ABIX
CYCLE STANDS

THE HOME OF THE BRITISH CYCLE.



The most efficient method of storing cycles.
The type illustrated is only one of the many which we manufacture.
Fully illustrated catalogue on request.
All stands are of steel, stove enamelled green for durability.
20 types for selection.

ABIX (METAL INDUSTRIES) LTD

FACTORY EQUIPMENT SPECIALISTS
TAYBRIDGE WORKS, TAYBRIDGE ROAD, BATTERSEA, S.W.11.
Phone: BATtersea 8666/7. Grams: Abix, Batt, London

IF you have a Telephone...

FOR HIRE OR SALE

you need a TELEVOX

★ **BOTH HANDS FREE . . .** enabling you to handle papers, make notes, etc.

★ **LISTEN WITH BOTH EARS . . .** this becomes very much appreciated when using a telephone all day.

★ **HOLDING ON IS NO LONGER NECESSARY . . .** You and your staff can carry on work during delays.

★ **WITH or WITHOUT INTER-COM.**

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★ **TELEVOX MAINS OPERATED . . .** No battery troubles.

PLEASE SEND FULL DETAILS OF TELEVOX TO

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'B'

5, BOURNE STREET, SLOANE SQUARE, S.W.1
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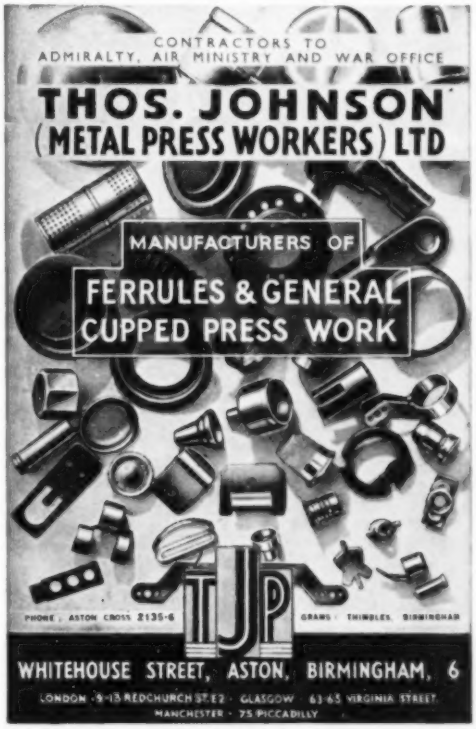


HERBERT E. GIBBS LTD
Directors: Herbert E. Gibbs, Mary M. Langton, Claude E. Gibbs.
First Avenue, Montague Road,
Edmonton, N.18 Tottenham 5111/2/3

May,
1952.

OFFICE FURNITURE

I am showing a compact range of Office Furniture at the British Industries Fair.

In addition to desks of standard 'sanitary' pattern, I am showing a re-designed double pedestal desk in Oak and also in Walnut.

I shall also have on show a range of tables with detachable legs suitable for general office use.

Herbert E Gibbs

KWICK-DRY
IMPROVED SUPER SOFT
PAPER TOWELS

ARE

Stronger

WHEN WET

do not disintegrate

For OFFICE, FACTORY and CANTEEN

These **BETTER** quality towels **REALLY DRY** and are **CHEAPEST IN THE LONG RUN** because, released **ONE AT A PULL** from the cabinet there is **NO WASTE.**

KWICK-DRY PAPER TOWELS

- ★ Cut your towel losses.
- ★ Cut your Laundry Bills.
- ★ Cut time waste.
- ★ Offer a *fresh*, cream shade towel for every occasion.
- ★ Remove infection dangers of the old communal towel.
- ★ Are stronger wet than dry and do not disintegrate.
- ★ Conform to 1937 Factory Act.

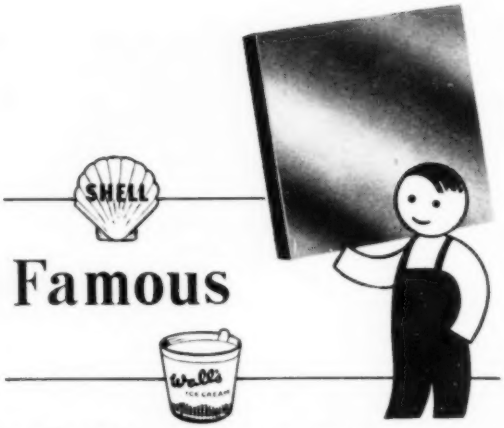
B.I.F. STAND MII

CUT COSTS—BE MODERN
install
KWICK-DRY de luxe CABINETS

KWICK-DRY TOWELS are also supplied flat-interfolded in packets

Full details on application to Towel Dept.

Freeder Brothers Paper Mills
BRIMSDOWN, ENFIELD, MIDDLESEX.
Tel HOWard 1847 (5 lines). Grams: Sylkocrepe Enfield.



Famous

Walls and Floors

wear

WOOLLISCROFT

INDUSTRIAL TILES

Woolliscroft Industrial Tiles won't harbour dust, they clean easily, and keep their original smartness for generations.

Write for samples of glazed wall tiles and plain, ribbed, and shot-faced floor tiles to

GEORGE WOOLLISCROFT & Son, Ltd.,

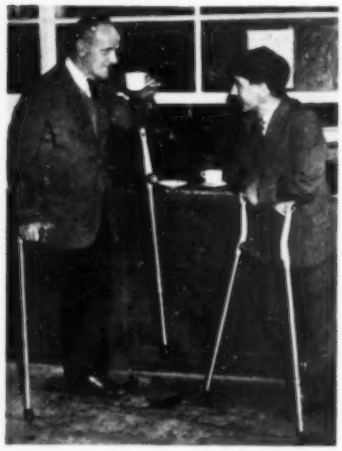
DEPT. B., MELVILLE STREET, HANLEY, STOKE ON TRENT.

BIF HIGHLIGHTS 1952

Health - Welfare - Safety Equipment

Lightweight Crutch

A TELESCOPIC crutch, made of aluminium alloy, is designed to give support to the elbow, rather than the armpit. This method gives greater freedom and comfort to injured or disabled



Free-movement crutches.

workers. A rubber ferrule prevents slipping, and sponge rubber handgrips increase the user's comfort.

The hinged forearm rest supports the arm and leaves the hand free to open doors, etc., if necessary.—(*Concentric Manufacturing Co., Ltd., Tyburn Road, Birmingham, 18. Stand D.222, Castle Bromwich.*)

Revives by Rocking

RESUSCITATION without the use of artificial respiration is possible with a new *Rocking Stretcher* that will make its first appearance at Birmingham. Chief advantage of the method is that it not only ventilates the lungs, but also ensures that oxygenated blood is circulated through the arteries. Even if the patient has broken ribs or other bones, this does not hamper resuscitation. The operator need not be skilled and does not become tired.—(*Cuxson, Gerrard and Co., Ltd., Oldbury, Birmingham. Stand B.516, Castle Bromwich.*)

Infection Barrier

BARRIER cream preparations for protecting the skin against all classes of irritant materials used in industry will be shown by Rozalex, Ltd.

Besides protecting operators from industrial dermatitis, the creams have proved useful in a number of secondary applications. Hosiery manufacturers, for example, have found that the number of silk and nylon threads broken by the rough hands of their operators falls to a very low figure if the creams are applied before work is commenced.

A readily available supply of the barrier creams is ensured by the *Rex* dispenser, which is economical and protects the cream from contamination. — (*Rozalex, Ltd., 10, Norfolk Street, Manchester, 2. Stand D.706, Castle Bromwich.*)

Low-cost, Low-level

LOW-LEVEL W.C. suites are normally expensive to install and occupy more space than high-level cisterns with long flush pipes.

Both these disadvantages, it is claimed, are overcome by the moulded plastic *Reverso* cisterns; in many cases the units can be installed at less cost than high-level cisterns. The double stocks usually fitted to this type of equipment have been eliminated, and they are replaced by a special side lever action; the lever and inlet are reversible.

The *Reverso* is particularly useful for replacement work where there is no room to fit a low-level suite. In these cases a cranked flush bend enables the *Reverso* to be fixed at a medium level.

The cisterns are moulded in black *Duranite* material and are hygienic, easy to clean, and virtually unbreakable.—(*Shires and Co. (London), Ltd., Guiseley, near Leeds. Stand B.700, Castle Bromwich.*)

Air Drying

HOT-AIR hand dryers are proving increasingly popular in factories and offices, for they eliminate the need for towels and are more hygienic in operation.

One type to be seen at the B.I.F. is the *Handy-Andy*. When a foot pedal is pressed, a stream of air is blown over an electric element which heats it. A fan then carries the air to the aperture, in which the wet hands are placed. If required, an attachment can be added which enables the face, as

Fifteen-second drier.

well as the hands, to be dried. An antiseptic pad incorporated in the unit protects users from skin infections.—(*Quiz Electrics, Ltd., 160, High Street, Teddington, Middx. Stand C.213, Castle Bromwich.*)

Robot Char

NEWLY developed "mechanical charwoman" is claimed to speed up scrubbing and drying of floors by as much as 400 per cent.

Named the *Scrubmaster*, the machine will scrub and suction-dry floors without the need for changing attachments. A ½ h.p. electric motor is fitted in the light-weight suction unit, which is mounted on castors. Attachments enable the machine to be changed into a suction floor polisher or vacuum cleaner complete with dusting tools, in a few seconds.—(*The Columbus-Dixon Organization, Empire Way, Wembley, Middx. Stand C.619, Castle Bromwich.*)

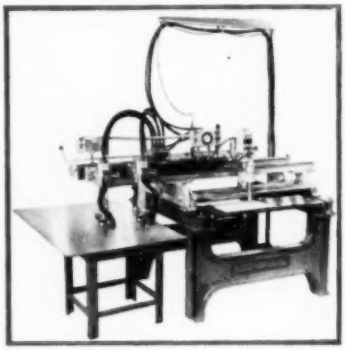
Time-saving Guard

SAVINGS of time amounting to half a stroke on press work are obtained by the use of *Fastrip* operator guards fitted with positive arrestor devices. The arrestor is designed to open as the press crank passes bottom dead centre on each stroke, instead of waiting until the end of the stroke.

The device thus ensures correct sequential operation of the guard and press clutch, and allows greater output.—(*J. P. Udal, Court Road, Birmingham, 12. Stand D.360, Castle Bromwich.*)

BIF HIGHLIGHTS 1952
EQUIPMENT FOR THE FACTORY

standard range of drives, including an electronic one. For "one off" jobs a template is unnecessary, as with a suitable drive the machine can work directly from a drawing.



The Hancomatic oxygen cutting machine.

A much smaller machine that has recently been introduced is the *Circaline Mark III*, and extensive use of aluminium alloy in its construction has helped to keep the weight down to 47lb.—(*Hancock and Co. (Engineers), Ltd., Progress Way, Croydon, Surrey. Stands D.739 and 638, Castle Bromwich.*)

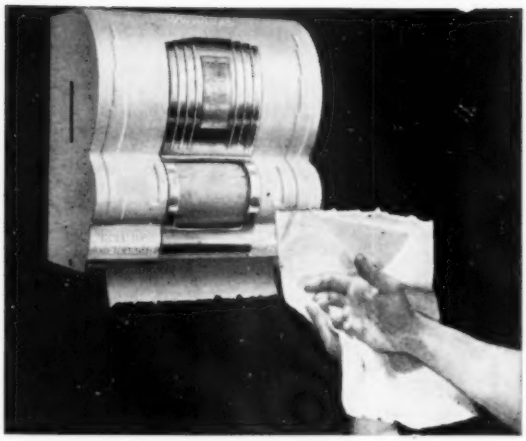
Self-loading Elevator

DESIGNED for mounting on a tractor, the *Autoloader* can be used for transferring gravel, stone chippings, sand or other loose materials from the ground into lorries or railway wagons.

The material is collected by a scoop at the rear of the machine and transferred by Archimedean screw blades to a continuous bucket system. From there the gravel, etc., falls on to a trough conveyor that projects over the vehicle being loaded.

The *Autoloader* can handle material at the rate of 1 cu. yd. per minute, and one man can operate it. Easily manœuvred, it can be driven on the road.

Displayed on the same stand will be an electrically-driven conveyor for loading or stacking bales and sacks.—(*T. & T. Works, Ltd., Billesdon, Leicester. Stands 1331 and 1230, Castle Bromwich.*)



Care and Cleanliness

go hand in hand

GUARD against the spread of infection and ensure that your washrooms are hygienically safe by installing the HARCRAFT PAPER TOWEL SYSTEM.

★ CONTROLLED DELIVERY OF THE TOWELS MAKES IT MOST ECONOMICAL.

★ LARGE ROLL SUPPLIES 430 PERFORATED TOWELS AT ONE FILLING.

★ HARCRAFT TOWELS COMBINE MAXIMUM ABSORBENCY AND WET STRENGTH.

The Harcraft Paper Towel System completely satisfies the requirements of the Facilities Act in providing adequate drying factories for your workpeople.

Write today for detailed quotation to:

HARCRAFT

LIMITED

ESSEX ROAD, ACTON, LONDON, W.3

TELEPHONE & TELEGRAMS

ACORN 3311

Automatic

SANITARY TOWEL MACHINES

Essential Equipment

in every

FACTORY
OFFICE BUILDING
LAUNDRY etc.

where women are employed

Continuity of Towel Supply guaranteed.

Machine illustrated dispenses "Dr. White's" well-known brand of Cotton-wool towel. Other makes available. Mechanism operates at 3d. and is readily convertible to 4d. if necessary.

Immediate Delivery. Full particulars from:—

LAMBART & SMYTH LTD.

2 Cadogan Place, London, S.W.1 *Tel.: SLOane 7629.*

Dermatitis, production's greatest enemy, can soon put the best hands out of action. Where industrial irritants —chemicals, oils, spirits, antiseptics and other skin irritants—are being constantly handled, Rozalex is essential. It creates a barrier against dermatitis. There is a type for every trade. Send for free sample and leaflet "The Skin in Industry" to Rozalex Ltd., 10 Norfolk Street, Manchester, 2.

ROZALEX

DERMATITIS BARRIER PREPARATIONS

SELLING IN CANADA

Continued from page 56

freight train, and winter can cause such transport dislocation that this period becomes weeks.

Canadian buyers expect on-the-spot service, and it is, therefore, useless to rely on these delivery methods. A chain of warehouses throughout the country is essential, and these must carry fairly heavy stocks of material. Immediate delivery is expected in Canada because that country has never known the severe shortages that we have experienced. Buyers will not commit themselves to keeping large stocks; they prefer to live on a week-to-week basis. To be able to give this service Ofrex had to ensure that they had the character of a local firm, and they achieved this by hiring office space in each town where a representative operated—and that means every town in Canada of any size. In this way the firm's name was listed in every local telephone directory, and there was always someone available to take messages and orders.

Another lesson Ofrex learned was to allow travelling salesmen adequate expense accounts. They each had to be supplied with a car to cover their territory properly, and heavy hotel bills are sometimes unavoidable. Average annual expenses in covering widely scattered Provinces can amount to as much as $5,000.

Ofrex now have a comprehensize organization in Canada, offering a nation-wide service which is comparable to that of their long-established competitors, and are confident that they can capture a much larger percentage of the market in the next few years.

Satisfied with the success of the campaign to sell Ofrex products direct to the office users, the company decided in 1948 to expand its activities—especially in the cellulose tape field. An associated company—Rexel Products of Canada, Limited—was formed to handle sales through wholesalers and retailers. A national advertising campaign was started to familiarize the public with the brand names of the organization; national newspapers, magazines, commercial radio, hoardings and trade papers were all used to achieve this end. Rexel deal through wholesalers and also directly with retailers, for they find that this stimulates the wholesalers into making greater efforts.

A further landmark for the Group as a whole was reached in 1950 when Industria, Limited, was formed to tackle the industrial market for cellulose tapes.

Each of these offshoots has been helped through its teething stages by salesmen who were trained in one of the older established Canadian subsidiaries. George Drexler's words will serve as a fitting conclusion to this case history of successful selling, and what he has to say can serve as an inspiration to other firms. "There is room for everyone in Canada," he maintains. "It is a growing country, whose national 'cake' has increased considerably in the past few years. In such an expanding market, even if we, as new-comers, take a sizeable slice of the cake each year, there is still more for everybody than there was prior to our entry into the market. One's competitors know this, and though they will fight you every inch of the way, they remain your friends, not your enemies."

Not a Drop Spilled From 4 Full Glasses!

We are not suggesting you need a conveyor for carrying glasses of water, but a conveyor that is so smooth and steady in operation that it can carry four full glasses without spilling a drop obviously has many applications where extreme steadiness is required. It may well be that the Skate Wheel is the answer to one of your own problems. If so, you may care to note that it carries 150-lbs evenly distributed, can be easily erected by one man and gives a lifetime of service with no upkeep or running costs.

Write: to Dept. "D"

MECHANICAL HANDLING EXHIBITION
OLYMPIA JUNE 4-14
SEE OUR EXHIBIT
STAND A8

LAMSON ENGINEERING CO., LTD. WILLESDEN N.W. 10.
Telephone: LAD. 2424
Telegrams: KELYWIL, HARLES, LONDON

There's a Fresh air about the office now

(14,000 cu ft of it per hour)

Easily installed — Quiet operation
Consumption only 25 watts

Xpelair carries a
National Physical Laboratory Certificate
confirming its performance

XPELAIR WINDOW FAN

A G.E.C. PRODUCT

THE GENERAL ELECTRIC CO. LTD., MAGNET HOUSE, KINGSWAY, LONDON, W.C.2.

"It was a lovely dress, Mabel!"

THE most willing worker is ready to gossip at times, and that is when silly accidents are likely to happen. Every industrial injury, however small, *must* receive proper treatment. The finest industrial dressing is PRESTOBAND — easy to apply, neat, and surgically safe. PRESTOBAND adheres firmly to itself, but NOT to the skin or hair. It needs no safety pins or knots . . . freely admits air . . . is water-resistant . . . and it comes off cleanly after use — leaving no sticky deposit on skin.

For bulk users the new PRESTOBAND 'Hospital' Pack saves about 40% on costs. 12 yard rolls, in three widths: ¾", 1" and 2". From your usual Supplier or from Manufacturers, VERNON & CO. LTD., PRESTON, LANCS. Tel: Preston Priory 83293. Samples with folder sent on request.

PRESTOBAND

THE ANTISEPTIC SELF-ADHESIVE BANDAGE

Sticks to ITSELF but NOT to the SKIN

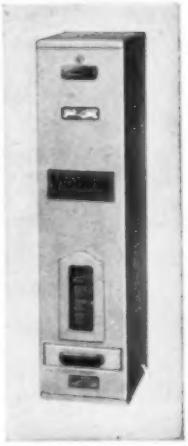
INSTALL

PETER'S

EQUIPMENT
TO
ENSURE
REGULAR
SUPPLIES
OF

SANITARY TOWELS

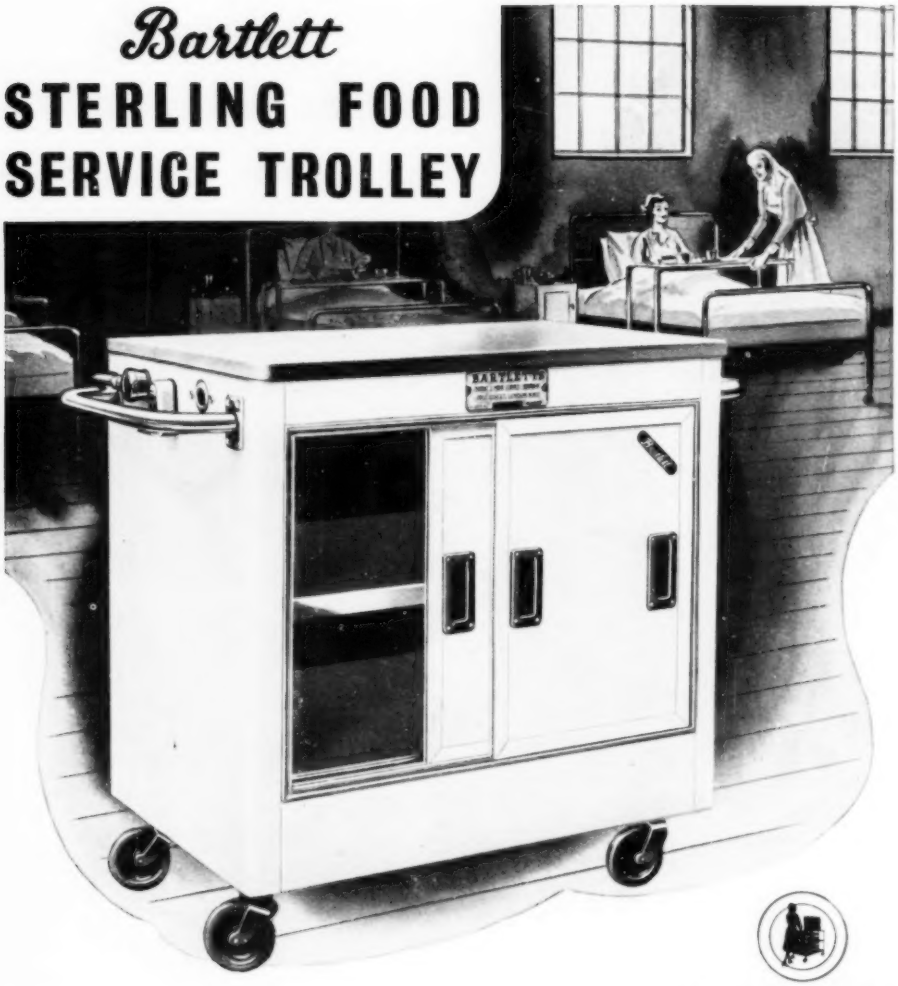
(Soluble and Non-Soluble —Choice of Brands)



PETER'S AUTOMATIC MACHINES LTD.,
1 LADBROKE ROAD, LONDON, W.11.

Phone : PARK 7608

Bartlett
STERLING FOOD SERVICE TROLLEY



Hot Meals—if the Kitchen is remote from the service point can be a real problem—whether for Hospital Wards, Institutions, Schools or Holiday Camps. The Bartlett Sterling Electric Trolley can be connected up while meals are being loaded and also at the service point. HOT MEALS FOR ALL IS THE RESULT.

Bartlett Cooking and Food Service Equipment—Famous since 1832

G.F.E.BARTLETT & SON LTD

BELL STREET, LONDON, N.W. 1. Telephone PADDINGTON 8222 S.B. 35
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BIF HIGHLIGHTS 1952

Equipment for Your Canteen

Major Help

POTATO peeling and chipping, vegetable dicing, grating and shredding, slicing, grinding, mixing, beating, mincing, dough-kneading: these are just some of the operations that can be performed by the *Chef Major*, claimed to be the most versatile industrial catering aid available. The various operations are carried out with the aid of a range of attachments.

The equipment will be making its first appearance at the B.I.F.

An interesting feature is the liquidizing unit which liquidizes

The versatile Chef Major.

vegetables and fruits and also pulverizes nuts and cereals, etc., and blends and mixes eggs and other ingredients into drinks, sundaes, purees, sauces and the like.—(*Kenwood Electrics, Ltd., Kenwood Works, Old Woking, Surrey. Stands C.313 and 212, Castle Bromwich.*)

Off-peak Heater

CONSTANT reminders are issued about the necessity for economizing in fuel during peak consumption periods. A heater

Resplendent in its plastic case—the New Look.

that will be shown at the B.I.F. by Berry's Electric, Ltd., makes such economies possible and yet supplies large quantities of hot water at all times. The heater automatically raises the temperature of the water in a storage tank to a predetermined level during off-peak times, and the water remains at this temperature for long periods.

The *New Look* 1½-gallon electric storage heater will also be on show. This equipment now has a plastic outer container, instead of the original steel casing, which gives a smooth, high-lustre finish to the heater.—(*Berry's Electric, Ltd., Newman Street, W.1. Stands C.507 and 406, Castle Bromwich.*)

Plastic Mixer

MACHINE that can save a lot of time in smaller canteens is the *Cheeto* electric mixer. Anything from light batters to heavy cake and pudding mixtures can be handled by the machine, which is simple and convenient to operate. Plastic and glass heat-resisting bowls are provided, and these rest on a freely revolving disc during mixing.

The *Cheeto* has streamline styling and a hygienic finish, and measures only 6½ins. long.—(*John Perry and Co. (Plastics), Ltd., 105, Baker Street, W.1. Stand T.1, Earls Court.*)

Heater for Hard Water

IN hard water areas it has often been found impossible to use electric immersion heaters because the scale deposits that form on them rapidly absorb the heat and eventually cause the elements to burn out. Much of this depositing was caused because the heaters were placed in the secondary or tap water circuit.

A new type of heater has now been developed and will be shown for the first time at the B.I.F., which can be fitted into the primary water circuit of a calorifier type hot water cylinder. When placed in this circuit a heater is not subject to deposits, and so it can be used as easily in hard water as in soft water areas.—(*Range Boilers, Ltd., Bridge Street, Stalybridge. Stand B.300, Castle Bromwich.*)

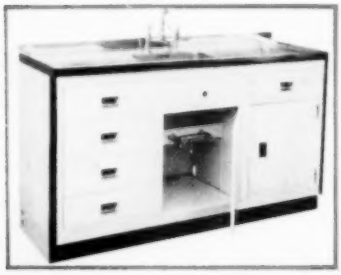
Cuts Canteen Time

ONE girl can slice up to 450 loaves an hour with the *Streamline* bread slicer, which can

Hundreds of loaves an hour can be sliced with the Streamline.

be supplied to cut slices of any thickness from 9/32in. Loaves of any type and up to six inches square and 12ins. long can be cut in one operation. The sliced loaf is kept together in the outlet chute by adjustable plates.

Double safety is provided for the operator, for the machine will not work unless the loaf is in position covering the blades, and the lid (which feeds the loaf to the blades by gravity) must be kept closed, otherwise the motor cuts. —(*Concentric Manufacturing Co., Ltd., Tyburn Road, Birmingham. Stand D.222, Castle Bromwich.*)



Sister to the Aquadale dish washer is this stainless steel sink unit.

Press-button Washer

ONLY manual operation necessary with the *Aquadale* dish-washer is the loading of the dirty dishes into the machine and their removal when they are required again.

All the washing, rinsing and drying operations follow each other automatically once the control button has been pressed. This cycle takes about 10 minutes.

The machine draws its hot water from an internal storage tank fitted with a 5 kW. heater. Only four gallons of water are used for a complete wash and rinse.—(*W. H. Paul, Ltd., Breaston, Derby. Stand B.324, Castle Bromwich.*)

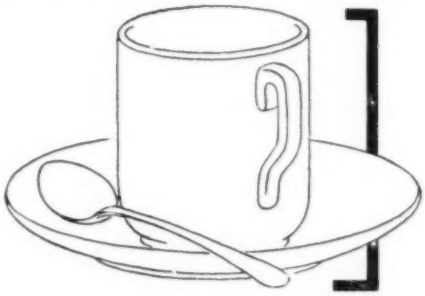
Running Buffet

IDEAL for serving meals in executives' and staff dining-rooms is an electric buffet that is a combined dinner wagon, hot-plate table and hot cupboard.

Several models are available with different arrangements of hot-plates and shelves. Glass panels and doors enclose the hot-plates, and in this cupboard food can be kept hot indefinitely.—(*Bertram Thomas (Engineers), Ltd., Worsley Street, Manchester, 15. Stand D.309, Castle Bromwich.*)

Dinner is served piping hot from this electric buffet.

Smith used these . . .
Smith is away today



. . . and other Smiths too, maybe; and production will suffer accordingly. Germ-infections can spread widely, rapidly, through unsatisfactory washing-up in the canteen kitchen. Even if kitchen staff do their job conscientiously, there can be no assurance that crockery, glass, cutlery are safe unless a scientific sanitizing routine is employed.

Is this a big job? No, the Deosan Clean Food Service Routine, based on years of anti-bacterial research and experiment, is easily applied in large kitchens or small. Kitchen workers like it; it makes their task quicker, more pleasant. It adds almost nothing to running cost. And it puts canteen hygiene beyond reproach.

May we send details of the Deosan Routine—or a representative—to your canteen manager?

Deosan Ltd: Catering Hygiene Division
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(*One of the Milton Group of Companies*)

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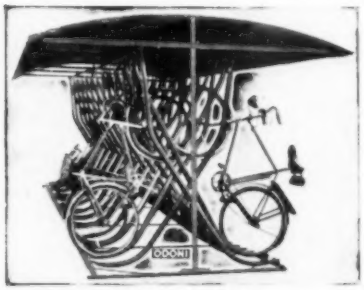

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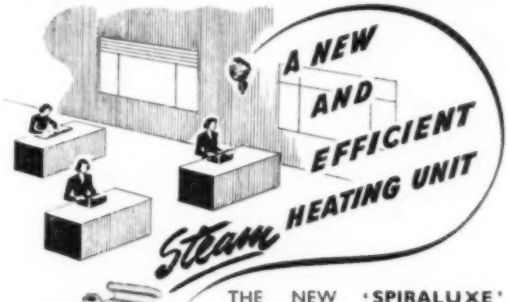

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This modern steam Heating Unit provides comfortable warmth **rapidly**, and is ideal for offices, board rooms, canteens, etc. Motor driven fan—ensures even heating throughout the room and eliminates cold spots. In hot weather fan can be run independently to promote circulation of cool air. The 'SPIRALUXE' is smartly designed, sturdily constructed. Also available for electricity (2 or 3 kw.) Guaranteed for 18 months. Write for List B.97.

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BIF HIGHLIGHTS 1952

Office Supplies and Accessories

Follow-up File

REPLACING the old type model with open tray, the greatly improved *System* desk secretary is useful on every executive's desk. Unique as a complete follow-up and reminder file, it keeps his papers in orderly form, out of sight, yet ready to hand; it automatically reminds him of jobs to be done and matters to be attended to, and it relieves him of details.—(*Business Publications, Ltd. Stand F.59, Olympia.*)

Hectograph Duplication

A NEW development in hectographic duplication will be shown by the Columbia Ribbon and Carbon Manufacturing Co., Ltd. Known as the *Ready Master*, it is a combination of printed master and carbon paper, and eliminates the use of both loose carbon sheets and printed copy forms, and can be used on any type of spirit or gelatine process duplicator.

The manufacturers will also be showing their range of inked ribbons and carbon papers.—(*Columbia Ribbon and Carbon Manufacturing Co., Ltd. Stand F.42, Olympia.*)

Built-in Key Ledger

FEATURED among a range of files, ledgers, filing systems and other office stationery will be the *Century*—a new type of thong ledger, which has the key built-in to eliminate the possibility of loss. A touch of the finger releases a collapsible winding bar which normally fits perfectly flush with the cover. A check lock device prevents overwinding.—(*John Dickinson and Co., Ltd. Stands M.29 and 38, Olympia.*)

Counts Dates

EUROPE'S largest manufacturers of counting and numbering devices will be exhibiting both at Castle Bromwich and Olympia.

Among the most interesting of the office machines will be the *Counting-Dater*. This machine stamps the date and provides an automatic record of the number of items stamped.—(*English Numbering Machines, Ltd. Stand F.4, Olympia.*)

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AMHerst BFB 3261/4
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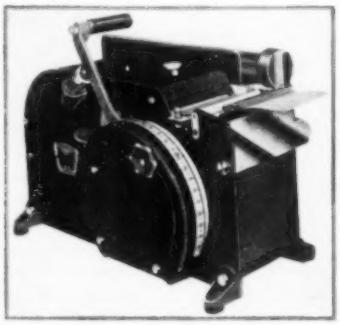
Experience Counts!
BRITANNIA FOLDING BOX CO. LTD.
DACE ROAD . OLD FORD . LONDON

Rapid Sealing

THE *Lightning* is the name given to a new automatic sealer designed to pack anything from the smallest parcel to the largest bale. The machine dispenses the well-known range of paper *Gumstrip* sealing and self-adhesive tapes. Other sealing machines and a label moistener will also be on display.—(*Samuel Jones and Co., Ltd. Stand M.49, Olympia.*)



The Lightning Sealer

Silk Ribbon

A NEW silk typewriter ribbon, a variant of the *Twincote* reinforced carbon paper, and new packs and sales aids for their complete range of carbons, ribbons, stamp pads and inks, etc., will be the chief items of interest on the stand of the Kolok Manufacturing Co., Ltd.—(*Kolok Manufacturing Co., Ltd. Stand M.30, Olympia.*)

Handsome Snipe

MODERN in finish and appearance, the *Snipe* stapler will be appearing for the first time at Olympia. The machine has a high capacity, is smooth in operation and well constructed, yet it is not expensive.

The well-known *Velos* range of stapling machines and staples, pencil sharpeners, perforators, numberers and daters, will make up the rest of the display.—(*Rees, Pitchford and Co., Ltd. Stand M.64, Olympia.*)

Tape Holder

NEW plastic dispenser developed by Rexel, Ltd., for their *Speedfix* self-adhesive tape will be shown on their stand at the B.I.F. It is compact in design—no larger than a cigarette package—yet it takes 36 yards of tape.

Also introduced at Olympia will be a new range of carbon papers for pencil, typewriter and hectographic work. These papers are claimed to be the cleanest and hardest yet produced. They have reinforced backs, will keep flat under any conditions, and are clean to handle.—(*Rexel, Ltd. Stand M.28, Olympia.*)

The Rexel Tape Dispenser

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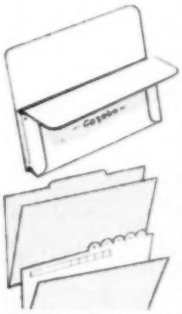

Gazebo open-top wallets with capacity gussets are available in six colours, at 12/6 per doz. (3 doz. less 5%). Ideal for cabinet filing. Gazebo folders are made in a variety of tabbings and colours for most systems.

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A number of surplus dictaphones, models AIOX and BIOX, in good order. £5 each at Lincoln. Apply Ruston-Bucyrus Limited, Excavator Works, Lincoln.

Duplicator, Roneo 500, almost brand new, perfect condition, with stand and spare roller, £60. Cost £85. Phone Romford 4772 daytime.

One Model 2200, Addressograph, electrically operated, listing attachment and automatic selection. Offers to Drysdale & Co., Ltd., Bon Accord Works, Yoker, Glasgow, W.4. Purchase Dept.

"Columbus" Electric Floor Polisher, Purchased October, 1949, hardly used. Cost £46 17s. 6d. Offers to Darnall Industries Limited, 18 Darnall Road, Sheffield, 9.

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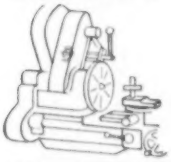

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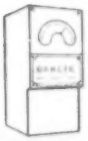

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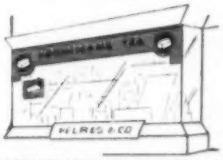

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